Dr H. Grosbeck

OHIO CULTIVATOR.

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The Horticultural Department.

SUMMER CULTURE OF GRAPES.

BY HON. E. W. BULL, OF CONCORD, MASS.

If the vines are newly planted, let them very much alone, taking care only to keep them free from weeds, and pinching their too rampant shoots if such there be.

They may lie upon the ground and will do better for it; but they must not be suffered to get into contorted shapes by rolling about in high winds. Prevent this by putting a stone upon them, if needful, (it is seldom necessary,) but remember the more freedom of action the young plant has the larger will be the growth during the current season, and the firmer and better the wood.

If the vines are older, they will of course be trained to the pole or espalier. In that case the cultivator desires to form them toward that shape which is to be permanent.

If he means to have the vine a single stem, with branches, he will rub out all superfluous buds, leaving only those alternate and well placed shoots, which will give him opposite branches, as nearly equidistant as possible, and take especial care to remove double shoots which should never be permitted to grow. Pinch the ends of the growing shoots occasionally and all axillary shoots, but not too closely. A good rule is to leave two leaves on all shoots from the axils of the vine, and to pinch at twelve or fifteen inches the growing shoots; but if the growing shoots have got beyond that, do not pinch back too closely, so as to take off well developed leaves, for "the more leaves the more roots," and you want to get an abundant supply of roots, to carry the future crop.

If the vines are older and on the pole, and you intend to grow them with a single stem, you will take care to pinch the ends of the alternate branches, which are to make the fruit bearing spurs of the future, often enough to get strong wood and well developed buds near their base, for these buds give you the crop.

Keep down all root suckers and superfluous shoots.

If the vine is upon the espalier, two arms, diverging from the main stem at about half a yard from the ground, should be trained right and left, at the angle of say 45 deg., and the spurs from these arms trained so as to fill up the whole espalier, without crowding it with too many shoots. If these side spurs are properly handled, the espalier will finally show a complete wall of grapes.

If the vine is being trained on the renewal system, with the main arms laid in horizontally, the grower will vigilantly watch lest the shoots nearest the main stem get out of hand and grow at the expense of other shoots, as they are very likely to do. On this system you crop the alternate upright shoots of the horizontal arms of the vine annually; and at the autumn prunning cut out the shoot which has borne fruit to its lowest bud, and leave the intervening shoots, which have not borne, at full length (to the top of the espalier) to bear fruit the next year.

You will find it necessary to exercise peculiar care to get the upright shoots of such equal strength that no weakling may be lost. I have not yet seen a vine, trained on this system for any length of time, that had not lost some of its upright branches and so lost its symmetry, and even the advocates of this system confess that it will be necessary to cut the vine back occasionally to get new arms and new bearing shoots.

As this involves the loss of one year's crop the grape grower will probably prefer the spur system.

Be careful not to let your vines carry too heavy a crop. A vine which has been planted three years and is thrifty may carry five pounds; if it has more, remove the surplus, for nothing can be worse than to give your vine the shock of overcrop while it is young; let it get well established before you undertake to crop heavily, for then an overcrop of this year will only result in a short crop next, and your vine will recover itself with rest, but the young vine would be permanently injured if it did not die even. In Europe, and even in California, the first crop is not allowed to exceed three quarters of a pound to a vine, so careful are they to avoid injuring the vine with a too heavy first crop.

Young vines, especially weak plants, will need watering during very dry and hot weather, and it is a common practise to water them with soap suds, but this method is bad, for the suds make the soil into a pasty consistence, and often the root of the young vine rots and the vine dies. Water young vines, therefore, with pure water, and give your suds to the old vines, which will thrive all the better for the application.—*Mass. Ploughman.*

TALK ABOUT STRAWBERRIES.

At Summer meeting of Western N. Y. Fruit Growers' Society, Rochester, June 27.

Mr. Hoag—I want to be informed about a new strawberry—the Golden Queen.

Mr. Vick—It was here six or seven years ago. Was then called the "Tom Thumb," is recognized as Trollope's Victoria.

Mr. Barry—I have fruited the Agriculturist during two seasons, and think very well of it.

Mr. Moody—Said it had not proved fortunate with him.

Mr. Downing—It is a fruit of great promise; is finely flavored and does not require very rich land to produce it.

Mr. Bronson—Think well of this variety. It stands the winter well. Not quite equal perhaps, to the Triomphe de Gand.

Mr. Keech—I raise plants for sale. The Agriculturist trains more liberally than any other of my 18 varieties. It stands the winter well. Very rich loam is not well suited to it.

Mr. Hooker—Had some of the plants. They were all killed by the severity of the last winter.

Mr. Bronson—Do not think it will bear transportation to market as well as some other varieties.

Mr. Downing—It is equal to the best in this respect.

Mr. Barry—This accords with my experience.

Mr. H. N. Langworthy—What about the Russell Prolific? Is it a hardy plant?

Mr. Downing—I think it is. Mr. Moody coincided in this.

Mr. Langworthy—How many crops will it produce?

Mr. Moody—My experience is that no variety will produce more than one good crop.

Mr. Langworthy—That is my experience.

Mr Bronson—This is the reverse of mine.

Mr. Hoag—It wants high nursing or it will not produce any perfect fruit.

Mr. Smith—My experience with it is limited. It is a strong grower, but with me it was not fortunate in fruiting. Does not carry well.

Mr. Hooker—Not favorably impressed with it.

Mr. Herendeen—Not satisfactory to me.

Mr. Hoag—The Jucunda is a large berry. Resembles the Triomphe de Gand. The foliage is like it. My favorites art the Wilson, Triomphe de Gand, and the Russell.

Mr. Hooker—Thinks well of the Jucunda.

Mr. Barry—Is it accounted a solid berry? What I have seen were hollow.

Mr. Downing—It is a poor bearer—not worth growing. Do not think it is hollow.—*Rural New Yorker.*

STRAWBERRIES AT ST. LOUIS.

The editor of the *Rural World* thus sums up the result of the strawberry season at St. Louis.

They have reached us from all parts around us. First they came from Egypt—that is South Pass and elsewhere in Southern Illinois. These of course commanded a high price, and could only be obtained by wealthy epicures. These were soon followed by the early sorts from our Pacific and Iron Mountain Railroads, which are in fact but a few days later than those from Southern Illinois. A week later, and the great bulk of the crop from our neighborhood comes in and the price reaches its minimum, which may be stated to average, at wholesale, 50 to 60 cents per gallon for Scarlets: the Iowa or Washington, 75 cents: and 90 cents for Albany.

Although large quantities of the Scarlets are still grown, (being an early kind,) the leading variety may safely be stated to be the Wilson's

Albany, it being grown almost exclusively for shipping—and also (except the Scarlets and a later kind, known as the Pineapple, grown by the same class of growers as the Scarlets are—namely, old fogies) by all our most intelligent and advanced fruit growers.

A few other varieties are grown to a limited extent, such as the McAvoy's Superior and Extra Red, the Moyamensing, Russell, and a few others—but the Albany may fairly lay claim to be the leading variety, and as yet we see or know of nothing to supercede it.

STRAWBERRIES AT ALTON, ILL.

At a meeting of the Alton Ill. Hort. Society held on the 7th of June, the subject of strawberries was taken up:

The Russel presented as finely flavored; not knowing how it will ship.

Mr. Kingsbury—Has the Agriculturist; very thrifty and productive.

Dr. Hull—How would you make a plantation of strawberries.

Mr. Riehl intends to set out in rows, three feet apart, and fourteen inches in the row.—Keep off the runners, cultivate in hills.

The Doctor objects to this. There is a great accumulation of plants to one root. If the root is destroyed by grub, or any cause, there is far greater loss than if plants are separate.

Mr. Holmes—They are more liable to bloom in the fall, and so the fruit destroyed. He prefers plowing the fall before, then simply harrows the ground when the plants are set.

Mr Kingsbury prefers new ground. It is the custom in Cincinnati to use new soil.—Dr. Hull takes up the plant with a garden trowel, leaving dirt around it. Rows of three or four feet apart, twelve or fourteen inches in the row, train the runners into the rows. Is setting out Longworth's Prolific. Is larger than the Wilson, more productive better flavored, keeps itself off the ground. Requires rich soil.

J. E. Starr has fifteen or twenty varieties.—Considers the Buffalo and Russell's Prolific the best. Has Agriculturist, very large, but not as productive or well flavored as the Russell.

F. Curtis has thirty plants of Jucunda. It has done very well. but sees nothing remarkable about it.

A man may have a great deal of manner, and no manners.

TALK ABOUT STRAWBERRIES.

AT NEW YORK FARMERS' CLUB.

Which is the best sort? C. Taber, the Market Reporter of the *Tribune*, says this question is quite as unsettled as it was a year ago. None of the fancy sorts seem to increase in market. A few new kinds make their appearance every year have a short run and then are heard of no more. Triomphe de Gand, Union and Austin show less this year than last. The sort which made the greatest sensation a year or two ago, the Agriculturist, is scarcely to be found in market. Perhaps those who have this sort are growing plants for sale.—They certainly do not grow fruit for market. The few offered look well, but marketmen say they are too soft to carry or keep well. The Triomphe de Gand loses ground every year. The fruit is good appears well but the plants are not reliable for a crop. Wilson's still takes the lead and comes out a long way ahead. Growers maintain there is more money in it than in any other variety. The Early Scarlet and Scotch Runners small as they are, have paid well the present season. After all, it is a difficult matter to give advice about the varieties of strawberries, for a kind which does well in certain localities with one kind of culture may fail entirely in another locality with different culture. Wilson's succeeds over wider range than any other. Upon the whole, growers differ about as much in their opinions as they did one year ago—some of them say they know less

The Committee of the Club which went out last week to Newark to look at the Durand Seedling strawberry in Mr. Brill's garden, made a report and also read a letter from Mr. Durand, giving a description of its origin and character. He states it to be a hybrid of Triomphe de Gand, Green Prolific, Peabody's Seedling, and we think one other sort, as several members remarked they didn't see how it could have four fathers. This is its third year, and of course first year of bearing to any extent, and although a handsome berry, of large size, prolific, rich scarlet color, remarkably firm, and growing with strong, rich foliage, some members of the Club are not as yet prepared to endorse it as the very best strawberry yet produced, and as likely to supersede all others.

Solon Robinson said he had heard the same

story of at least a dozen different kinds. A few years ago, this same Peabody, Green Prolific and Triomphe de Gand was each in turn to supersede all other varieties. Each in its turn has gone, or is going to a state of oblivion. I know of but one kind of strawberry which has stood the test of cultivation for market in almost all sections of the country, and that is the Wilson, much despised by some because it is sour, yet much relied upon because it will grow and produce fruit, where many of the fancy sorts have proved magnificent failures in spite of grandiloquent recommendations.

For the Ohio Farmer and Cultivator.

AMONG THE STRAWBERRIES.

The present is strawberry season, and we have enjoyed ourself among them, eating, comparing, &c. The result of our convictions are that of the one hundred or more sorts that we have examined, very few are desirable except to the collector of sorts. For family use alone some extra flavored sorts may be occasionally desirable, but as a general thing the berry that produces abundantly of a large sized, handsome and well-flavored fruit, and has a healthy, hardy vigorous vine, is the one to plant.

After looking and eating of, as we say, a hundred or more varieties, we would select Ladies' Finger, and French's Seedling for early, Wilson's and Jucunda for general crop, and Green Prolific for late. The latter was originated at same time as Agriculturist, and by the same grower. It does not give quite as large fruit as some of the first berries of the Agriculturist, but its fruit is all alike and large.

Wilson and Jucunda are the greatest bearers, and Wilson and Green Prolific the two healthiest and hardiest vines. F. R. E.

Celery.—This is a crop too seldom cultivated in farmers, gardens. The usual practise has been to transplant in trenches for the convenience of earthing up as the plants grow, but this is apt to get the roots into a lean soil unless the ground is worked very deep. A better way for most soils is to set the plants just a little below the surface and haul up the earth as the plants grow. The soil or other material for earthing up celery should be clean so as not to taint the tender stalks. The roots should stand in a very rich, fine soil, so as to ensure a quick growth for the plants. Clean sawdust and wood shavings are sometimes used to advantage in hilling up.

THE PEPPERMINT CROP.

A grower of peppermint at Three Rivers, Mich. furnishes the following items concerning the cultivation and distilling of the crop:

I am one of the largest growers of peppermint in this State, cultivating from forty to one hundred acres per year. I will give you a general idea of the manner of cultivating mint and extracting the oil. It is a native of wet land, but will yield but little oil unless raised on dry ground. A rich sandy loam is the best soil for a crop of peppermint.

The plants are propagated from the roots of plants that grew the previous season. The ground is well prepared and marked out as for planting corn in drills. The rows are made about thirty inches apart, and the roots are placed along lengthways in the mark, and covered lightly with finely pulverized earth. After this the young plants are cultivated with a horse hoe and hand hoes, just as Indian corn is dressed out, with level cultivation. Cultivate and hoe till July. Cut the mint in September. When the stalks and leaves are partially wilted, rake it up and haul it to the distillery. The oil is volatile. Hence we steam the herbs in two large tubs, alternately. The oil escapes in the steam and is passed in a tin worm one hundred feet long, where it is condensed and collected into a receiver. As the oil is lighter than water, it floats on the surface of the water, and is dipped off as it accumluates. After this the oil is filtered, when it is ready for market.

An average crop is ten to twelve pounds of oil per acre for two successive years. After this plow up the mint, raise some other crop and seed to red clover. The expense of a mint distillery is about $400. The oil is worth from $2 to $4 pound. This is an encyclopedia in a nutshell. If ten to twelve pounds of the oil of pepermint is all that can be raised on rich ground, it will be more economical to raise some other crop.

Tall Growing Plants, like dahlias hollyhocks &c. should be tied to stakes to prevent damage from wind. If the ground becomes dry around the stalks, mulch with fine hay, and treat them to a drench of cold soap suds every washing day. A dash of chamberlye in the soap suds will make it all the better.

If you go to a dentist, you sustain a double loss—your tooth and your money.

SHAPING FRUIT TREES.

To secure a handsome and withal a desirable shape to fruit trees, the orchardist must be much among his fruit trees in the growing season to lop off undesirable shoots and give direction to such as are to grow. As a general rule we should avoid having crotches in fruit trees. In young apple trees, very frequently, two limbs spring out close together in the top, and, if left to grow in that way, they will soon begin to crowd each other; after a time with the help of the wind they are split asunder, in many cases to the utter destruction of the tree. When the tree is young this evil can be very easily remedied by simply cutting off one of the branches, and without any injury. But if neglected for years, there is more or less injury done by cutting off so large limbs, besides having badly shaped trees.

In grafting large apple trees in the top, two scions are nearly always put into each limb or cleft, the principal reason of which is that if one dies the other may grow. If the work is well done, both scions will generally live: and many people let both grow together, thinking it to be the better way. After the grafts are firmly established—generally the second year—one should be cut out, for, if two are suffered to remain in one limb, they are very apt to split apart and thus ruin both branches.

TREATMENT OF DAHLIAS.

BY J. P. NORRIS, PHILA.

The Dahlia is, perhaps, one of the easiest of all plants to degenerate. This is owing to two reasons—first, that the root is often allowed to increase in size, and is not properly divided; and second, that they are frequently planted too near together, and the pollen of one plant impregnates another; an imperfect flower being the result in future seasons. Of this latter assertion we are not positively sure, but it is the only reason that we can see to account for the alarming change in color in the flowers of Dahlias planted near to each other.

If a Dahlia root is allowed to increase in size from year to year, it is almost certain to produce inferior flowers. The root being so very large has so many sprouts that each sprout chokes its neighbor, and like a hill of corn not properly thinned out, the result of the whole is inferior. A medium sized root will produce much finer flowers than a very large one. But it is possible to go to the other extreme and make the root too small. This is frequently done by dishonest florists who are too eager for gain. If you are buying a new and rare Dahlia, however, you must not expect to get a very large root. In the latter case it is advisable to allow the root to expend all its energies on its growth and not allow it to flower the first season.

Again, many Dahlias are much injured by allowing them to flower as soon as they show any inclination to. All buds that appear while the plant is growing should be cut off; although you deprive yourself of early flowers by this process you secure much finer ones in the end. And who would not have one perfect flower rather than a whole bunch of imperfect ones?

Very many Dahlias are injured by planting too early in the season. They spring up and make a rapid growth and are in flower in July. The sun being too hot for them at that time, the flowers are necessarily imperfect. We are of the opinion that from the first to the fifteenth of June is quite early enough to plant. Dahlias when planted at this time, flower in September and October, when the rays of the sun have lost a great deal of their power. Besides, in the fall there are comparatively few flowers and it is then that Dahlias are appreciated; but when they come in the full height of the flower season, when roses and other finer flowers claim the attention, they are very apt to be forgotten or overlooked. The fall is undoubtedly the time for the Dahlia.—*Gardener's Monthly.*

Our Grapes are making a vigorous and healthy growth; as yet we have seen no appearance of mildew or rot among them. The fruit bunches as well as the young runners were severely handled by the gales of June, but what is left seem to be making the most of their chance. Mr. Leick, our great wine maker of Cleveland, says the grape crop in this vicinity suffered very much by the spring storms and the general yield will be seriously affected. The Sandusky *Register* of last weeks says a good many of the vineyard-men of that region are wearing rather long faces this summer. The season has been decidedly unfavorable for the grape crop. The continued cold rains of last month injured it materially. The earlier rains, coming when the grapes were in their most tender state, caused blight and mildew to some extent, while the later rains so affected them, as to cause many to fall off.

For the Ohio Farmer and Cultivator.

TALK ABOUT ROOTS OF PLANTS.

A plant is a living organized body, so constituted that it is susceptible to changes in the temperature and to extremes of cold. The delicacy of its tissues is no less singular than the peculiarity of their arrangement. Its continued vitality depends upon its drinking and breathing. The leaf, the flower, and the manner of growth, are objects of commingled interest and admiration, while the no less wonderful habits and characteristics of the roots are seldom observed. The root or radical is of such vital importance that we propose passing the evening talking about its peculiarities and functions.

The radical which forms the basis of plants, and which bears up the beautiful superstructure, is the principal source through which nourishment is received. Owing to the delicacy of its structure, and its avidity for moisture, its tendency is downward. The extreme tenderness of the radical, is due in part to the darkness which it seeks. If exposed to sunshine and cold, the epidermis would become thick and tough, and unfit for the office for which it was designed.

Tracing the root from its incipiency to its development, we find that as soon as it becomes detached from the integuments of the seed, it penetrates the soil, and is divided into fibers or branches. These branches after reaching a certain depth extend horizontally, keeping a uniform distance from the surface. Their number and extent correspond to the demands of the ascending axis for nutrition. Not only does the radical furnish nourishment to the plant, but by it the stem or trunk is maintained in an upright position.

While there are points of resemblance between the stem and the base of the plant, the latter is distinguished by the irregularity in the arrangement of its branches, and the absence of stomata, buds and pith. There are instances where buds are developed by the roots; this however, only occurs when the main stalk is in an unhealthy condition, and the new offsets or hoots are merely adventitious.

There are many modifications of subterranean stems which are often confounded with the roots; the principal ones are, the bulb, the corm and the tuber. The bulb partakes of the nature of the bud; it is oval in form, and consists of scales closely compacted in concentric layers, emitting stems from the center, and roots from the collum or neck. The onion (*Allium cepa*) is a familiar example of the tunicated variety of the bulb. The more common varieties are composed of thickened concave scales, connected at the base, as in the lily and tulip. The corm differs materially from the bulb in its structure; instead of the marked distinctive layers it is made up of a uniform solid mass, as in the Indian turnip (*Arum triphyllum.*) The tuber is an annual provided with latent bulbs, commonly called eyes. The potato (*Solanum tuberosum*) belongs to this class of subterranean stems.

The summit of the radical, that is, the part which connects it to the ascending axis, is the collum or neck, and is situated between the ascending and descending axis, and is the only fixed point of the plant.

The divisions of the root are the caudex, fibrils and spongioles. The caudex is the main body of the radical, the fibrils are the finer branches sent off from the caudex, and are the true roots. The spongioles are the tender extremities of the fibrils, and are sometimes termed the growing points, because through them the moisture is taken up and distributed to all parts of the plant.

The analogy existing between the aerial and subterranean branches of many plants is peculiarly striking. Each may be made to perform the functions of the other; that is, invert the willow or the maple, the branches will become roots, and the roots branches. Or take a stalk of the currant, insert either end in the ground, and it will take root, or both ends, and the result will be the same.

The physical structure of the root corresponds to that of the stem, as it does indeed to the branches, petioles, leaves, and even the flower and fruit. The same tissues are found in it, though the cellular and vasiform predominate. The presence of woody tissue is recognized by a ligneous fiber which belongs more particularly to the ascending axis. Cellular tissue consists of separate cells or vasicles adhering together, while the vasiform is composed of large tubes called ducts. Woody tissue or fibre is formed of slender, transparent membranous tubes, tapering each way, and adhering together at their sides; the end of one tube extending beyond that of the other, forming continuous threads. These tubes not only give strength, but through them the fluids are transmitted to all parts of the plant. The fibrils, which are

subdivisions of the caudex, consist of minute bundles of vasiform tissue, enclosed in a loose cellular epidermis. Where the vasiform tissue is exposed, at the extremities of the fibrils, it assumes a spongy condition, hence these points are termed spongioles. Place a radish in a vessel of water, so that the spongioles may absorb the moisture, and it will flourish for some time.

The most important function of the radical is absorption, or its capability of drawing from the earth such properties as are essential to the growth of the plant. The cause of the absorption of fluids by the roots has been a subject of much investigation. Perhaps the most satisfactory conclusion is the one given by a celebrated philosopher, who says: "There is a phenomenon in natural philosophy which bears a strong resemblance to absorption in physiology. To illustrate this, let the broad end of a tunnel-shaped glass be firmly covered with a piece of bladder, and the cavity within be filled with gum or sugar. If now the outer surface of the bladder be immersed in water, a passage of fluid will take place through the membrane into the glass, so that the volume of the solution will be much increased, while at the same time, there will be a current in the opposite direction, the solution within passing into the water without, but in a much smaller quantity. If, on the other hand, the glass be filled with water, and immersed in the solution, it will be partly emptied by this action. The principal current is endosmose (flowing inward,) and the other exosmose (flowing outward.) The conditions requisite for these two currents, are two fluids of different densities separated by a porous partition. These conditions are found to exist in the root. The spongiole is the porous partition; the water around it is one of the fluids, and the other is the fluid within rendered dense by the admixture of the descending sap elaborated by the leaves. Now if the absorption be the *endosmose* resulting from these conditions, there must be the counter current, the *exosmose*, also. This is proved by the fact that the peculiar product of the species may always be detected in the soil about the roots of the plant." This idea in regard to the absorption of plants, however theoretical it may seem, is accepted by Silliman and others.

In regard to the various forms of the radical, the greater number of trees and shrubs have ramose or branching roots, consisting of various ramifications sent off from the caudex. The carrot (*Daucus carrota*) has a fusiform, a spindle shaped caudex, tapering downward, the little fibrils from this form the true roots. When a fusiform caudex is divided it is called forked; when it tapers from the collum downward, a conical or tap root. One of the varieties of this kind is the primrose, in which the caudex has the appearance of having been bitten off; the radical of the violet, (*Violaceæ pedata*) is an example. Another peculiar variety of the fusiform is the common turnip, (*Brassica rapa,*) called rapiform, or turnip-shaped.

The extensive family of plants belonging to the order *Gramineæ* send out their fibrils without any caudex.

Beside these varieties of the radical, there are others distinguished by not being fixed in the earth. These plants float upon the surface of the water until after flowering, then they sink to the bottom, become fixed in the mud, and there ripen their seeds. Among the aerial roots are many very remarkable varieties. Some originate from the joints of creeping or prostrate plants, others from the bark of trees. The epiphytes derive their nourishment from the atmospheric air. In many parts of the South, many varieties of this peculiar species abound, hanging pendant from the forest trees. It is no marvel that aerial roots can subsist upon atmospheric air, when we consider that in it are all the properties essential to their support — Modern science teaches that the vegetable kingdom not only has the same chemical composition as the atmospheric air, but in its mass is actually derived from it. This subject, however, is irrelevant to the purport of our present writing.

MARY DAY.

THE BEST GRAPE SETS.—In answer to a writer in the *Horticulturist* who complains of the high price of what he calls "basket layers" of grape vines, Mr. Griffith, grape grower of North East Pa. says "a good, strong, well grown yearling plant can be grown for about ten cents, and as the cutting or bud (except of the new and rare sorts) can be obtained for about half a cent, such vines ought to sell for something less than twenty cents. From an experience of more than twenty years during which time I have grown some millions of grape vines, one hundred thousand of which I have fruited in my own vineyards, I am fully able to demonstrate that a well grown one-year-old vine, produced from a single bud in *open culture*, is the best and most valuable plant that can be grown."

FRUIT MEETING AT PITTSBURG

JOHN J. THOMAS reports for the *Country Gentleman*, the following items of the late meeting of the fruit men at Pittsburg:

The President, D. W. Gross of Harrisburgh, having called upon the different delegates for a statement of the fruit crop in their respective regions, Dr. Warder of Cincinnati, said that the strawberry crop had been mostly destroyed by the unfavorable spring; not more than one-tenth of the usual amount remaining to ripen. He regarded protection by mulching as an important means of preventing such disasters. In some seasons strawberries had sold as low as three to five cents per quart; now they brought from thirty to fifty cents. The winter had been very hard on the raspberry, and the Purple Cane, usually regarded as quite hardy, had been killed, as well as the Red Antwerp.—Blackberries had escaped without injury. There were very few or no peaches. There would be but few apples, pears, currants or gooseberries. The grape crop was promising, but cultivators had learned not to count on a crop with confidence until after harvest.

Dr. Massey of Maryland, stated that the peach crop, which was usually their main reliance, would not be this year more than one-third the usual amount; being the greatest failure they had experienced for four years. Pears were promising well, and there would be, probably, a tolerable crop of apples.

E. Satterthwaite of Montgomery Co., Pa., said the strawberry crop was a poor one; that apples set heavily, but were largely destroyed by the curculio. Out-door grapes were mostly a failure. Pears had not succeeded well; altogether he presented rather a discouraging report.

Mr. Earl of Southern Illinois, said that success in fruit raising was nearly in proportion to the efforts in its care and management. One of the most successful cultivators is Dr. Hull of Alton. He protects his fruit completely by destroying the curculio in the following manner: He has a large convex frame covered with canvas, something like an inverted open umbrella, with an opening on one side to take in the trunk of the tree. This is attached to a wheelbarrow, and is thus easily moved from place to place. The curculio is brought down by jarring the tree, and passed down through a central opening in the canvas into a tin filled with some destructive fluid. Without this care, both his plum and peach crop is destroyed by this insect. He plants these two kinds of fruit in alternating rows: and as the curculio does not resort to the peach so long as the plum is at hand, he saves both by killing them only on the plums.

J. M. Jordan of St. Louis, said that the grape crop promised well in Missouri, particularly the Concord, but that strawberries and cherries were few.

J. Knox of Pittsburg, said that the strawberry crop was only about the usual amount, having been injured by the severe frost of winter and the cold winds and drouth of spring. He regarded the Jucunda as possessing the highest promise for market; next to this he placed the Fillmore, and then the Russell; the latter was an excellent fruit, but rather soft. The Golden Seeded and Burr's New Pine he found to be the two best early sorts. Kitley's Goliah and Nimrod were valuable late varieties. The Russell was entirely distinct from Mc'Avoy's Superior. In answer to inquiries, he added that he did not expend a great deal of labor in preparing the soil. He found three successive crops sufficient, and then preferred to make a new plantation. The ground is kept clean, and well cultivated by hand labor, and the plants protected by mulching in winter.

Several cultivators spoke very highly of the Agriculturist as being very productive and hardy. Dr. Bacon of Pittsburg presented a box of specimens of this sort, grown on a bed less than one year planted, some of them an inch and a half in diameter. Dr. Warder denounced he Wilson as "an abominable berry and a poor bearer," yet the world has gone mad after it He greatly preferred the Extra Red, and remarked that the Necked Pine was one of the most valuable sorts at Cincinnati.

Mr. Earl of Southern Illinois, said that the Wilson was preferred to all others, and had enabled them to supply Pittsburg and other markets for nearly a month before the usual time of ripening at the latter named places.

A. W. Harrison of Philadelphia, remarked that the failure of the strawberry, like the present season, might be prevented or lessened by thorough underdraining, by belts of trees for protection, by avoiding rich manuring, and by giving deep cultivation, so that the roots might extend well below the surface. These views were corroborated by others.

A worthless bond—a vagabond.

BASKET WILLOW.

Our neighbor GRIMM has a considerable manufactory of willow ware, suchas baskets, chairs, cabs, &c., where he works up sometimes a ton of cane per month. Ozier or basket willow is raised in the neighboring towns, mostly in Bedford, Claridon, Northfield &c. within twenty or thirty miles of Cleveland. The prices paid for oziers are from eight to sixteen cents per pound for peeled and dried, or about $20, a ton for green unpeeled. At Bedford there is a machine for peeling the rods, but very much of this work is done by hand by children stripping them through wooden or iron forks made for the purpose; the price paid for peeling is two cents a pound and a diligent child can peel fifty pounds in a day. Three pounds of green oziers will yield one pound of peeled and dried canes; six tons after they are peeled and dried, is considered a good yield for an acre of those willows. Here is a good crop for such low and moist lands as cannot well be put to other cultivated crops. The plantation once well started in willows will stand for some years and yield a cutting every season.

THE JUCUNDA STRAWBERRY.

At the recent fruit grower's meeting at Pittsburg, Mr. KNOX's *Jucunda* was tested and criticised. John J. THOMAS, the veteran pomologist of the State of New York, says of it:

"Much interest was felt by the visitors to see the famous Jucunda, which was just beginning to ripen. For large size, rich and brilliant color, and beauty of appearance, it is perhaps not equalled. The flavor, however, is moderate or poor, being rated at different grades according to peculiarity of tastes in different persons. It is said to be exceedingly productive, and will doubtless prove a profitable market sort."

Dr. BLAND of the N. W. *Farmer*, Indianapolis, who seems to have slept with friend THOMAS at Gen. NEGLEY'S—says:

"On leaving home our friends charged us to learn all we could of the merits of the new strawberry styled by Knox his 700, but commonly known as the Jucunda, and we are ready to report. It is as fine a looking berry as we ever saw; not quite so large as the Agriculturist, but better shaped and of more uniform size; seems to be a fine grower and quite prolific. We saw fifty baskets of them, holding a pint each, which were said to average fifteen berries to the basket. Our opinion was made up, however, from seeing it growing, and plucking the fruit and tasting it, and we are sorry to have it to say it did not stand the test of our palate well. We do not like the taste of it very well. Its principal fault is its want of acid. We like an acid fruit; most persons however, would like the Jucunda, we are inclined to think, and its great beauty would make it very popular in market. As to its qualities for shipping, they are fair; not so good as the Wilson's Albany, but better than a majority of berries. We advise our readers to try it."

BEAUTIFUL PETUNIAS.—Every time within the last month which we have cast an appreciative eye upon those flower-beds by the side porch where we welcome the morning light and take leave of it again in the evening, we have turned to admire a couple of petunias in the lot sent us by Mr. Hanford of Columbus—the "Gen. Sherman" and "Phil. Sheridan," by name upon the labels. Gen. Sherman is the size of a large convolvulous, pure white splashed with crimson—or crimson splashed with white, there being about an equal division of colors regularly distributed in half leaves all around the flower. This is a very striking figure upon the flower bed. Phil. Sheridan is very double, almost like the largest double balsamine, of a very rich purple color. These two splendid flowers do no discredit to their gallant namesakes.

GRAPES.—Wm. Saunders says he holds two undeniable facts in grape culture: 1st, that the best fruit is produced on the strongest and best ripened shoots, and 2d, that the shoots produced from spurs never mature so thoroughly as those produced from terminal buds. Farther, that properly ripened fruit will never be produced from unripened wood. Fruit apparently well colored may be seen on green growths, but such fruit does not possess the characteristics of a well ripened bunch of grapes.

APPLE TREE BLIGHT.—We have noticed within a week past that an extensive leaf-blight is affecting the apple trees in this region, causing the foliage on the ends of the branches to look as if scorched in a flame of fire. If the disease continues to spread it will seriously affect the ripening of the fine crop of apples now upon the trees.

The Agricultural Department.

DO YOUR BEST.

The shabby and unsatisfactory condition of fields and crops at this time is not to be charged entirely upon Providence. Farmers cannot control the severity of the cold in Winter or the storms of Spring, but they can so shape their style of farming that these causes will not so seriously affect the condition of their crops.—This lesson should not be lost upon those hard working farmers, who think they do the best they can, but if they undertook less and did it better and in season, would meet with a better reward for their labor. This fact has been stated over and over again, till it would seem to be well so established as not to need further repetition; but it is one of those palpable truths, which, while every one acknowleges its force, still nearly every one runs in the face of it to their own damage. We intend to keep on repeating this homely truth, in hopes that many of our farmers will finally come to act upon it, and show that the soil of such States as Ohio, Indiana, Illinois, &c., is capable of sustaining the present stock of inhabitants, and all their sons and daughters too, for generations to come. So there shall be no excuse for the drain upon our population and capital, and social ties, by which so much of the labor and money and domestic stability of the country, is lost to the mother states, without bettering itself by the change. There is a noble virtue in a stable attachment to the soil of ones nativity, which does not so much pertain to those restless, roving souls, who have no particular regard for one place over another, and love no place very much. We need to cherish this homestead attachment and stability as a primary condition to the better cultivation of the soil, and the building up amongst us of a substantial and enduring nationality, with its landmarks of remembrances for many generations.

While the average of all of any particular crop in Ohio, makes a poor show upon the census, yet it has been fully demonstrated that even upon ordinary land, skillfully cultivated, there have repeatedly been harvested crops four times the average, and this without strictly extra outlay of labor above what any prudent cultivator would subscribe to. Let us suppose what is perfectly attainable, that the wheat crop of Ohio shall be made to average twenty bushels to the acre—not to all the acres as now pretended to be gone over, but to as many acres as can well be farmed in that crop—and what a vast addition would it present to the property of the men who go about grumbling of hard times. The agricultural societies often refuse to receive the entry of a corn crop for premium, that fails below one hundred bushels an acre, while the average for the State is only about one-third as much! a poor commentary upon the average skill of such a people compared with what some of its ordinary farmers can do.

Incited by the determination to win a premium, some persons will bestow all necessary care upon their crops. This is well enough as far as it goes, but it should be really the least of all motives to good cultivation, and it is only by reason of the infirmity of the flesh that the prize system is even tolerable, in a civilized community. The motive to excellence should be in the reward of excellence, of itself, and Industrial Exhibitions of the country, be as schools of excellence and mutual profit, rather than arenas for the strife of personal superiority and triumph of one individual over another, instead of a comparison of successes for the benefit of the whole.

Let a man enter into competition with himself, and wherein he sees room for improvement let him go on to make that improvement, and his premium will come in the shape of better experience and more satisfactory success. He need not hate his former self, but he may the more esteem his present improved self, and as he sees the way open to still better knowledge, he can leave margin to esteem his future self in proportion to his future progress in excellence; and because he esteems himself on this account of intrinsic and progressive excellence, he can for the same reason, esteem every other man likewise. This is what we call the true philosophy of personal and social competition, and if all men would live up to the capacity of this philosophy, we should not need artificial stimulants to industrial action.

Live Fence.—A correspondent of the Kansas *Farmer* describes a kind of live fence in use in that country, consisting of a boy and some hounds on the run.

Two things to be kept—your word and your temper. The former when dealing with a printer, and the latter when disputing with a woman.

BUCKWHEAT.

Almost any soil will produce buckwheat but it is best suited with light, warm lands of moderate fertility. It does very well on low, moist lands which dry off late in the spring and suffer from drought during the heat of summer; when early sown it requires most moisture.—It germinates quickly, and soon throws out sufficient roots and leaves to secure a supply of water both from the soil and atmosphere. The cultivation usually is simply to plough the land after green sward early in the spring, then harrow or gang at the time of sowing. It is often sown on ground infested with weeds, which it is desired to subdue; in that case more thorough preparations should be given, that the entire surface may be entirely covered. In all cases it is best to have the ground in fine tilth, and generally to roll after harrowing the seed. Buckwheat, although it will grow without manure, feels the application as quick as any other plant, and a corresponding increase in growth is produced. Plaster and ashes exertan immediate and beneficial influence.

The time of sowing is usually between the 1st and 28th of July, though it may be sown earlier—as soon as danger from late frosts is passed. Early sown buckwheat is liable to be blasted by the heat of July and August—late sown is equally exposed to drought often occurring in September, and in addition to this early frosts. The cultivator must suit his convenience in this matter, keeping in mind that some lands are sooner effected by drought and frost than others. The ambunt of seed generally sown is a bushel per acre, but it is better to sow less than more, especially on better soils. The great fault in sowing is that too much seed is sown per acre.

Though the blossoms continually forming produce seed as late as the season will allow, the first ripened is heaviest and most valuable. It should be cut, perhaps, as soon as the lower leaves begin to die, and with the cradle if possible. If a frost should occur and any portion of the seed be ripe, it is best to harvest at once. After cutting, the swaths are raked into small bunches, and set upright with the heads twisted together, leaving each bunch to stand alone, the butts spread and resting upon the ground. Rain injures it but little if thus treated, and it may stand for several weeks unless thoroughly cured. It shells very easily, and much waste often occurs before it is secured. Care in handling, and use of tight bottom boards for the wagon or sled upon which it is drawn to the barn, will prevent this loss to a considerable extent. In case some other grain which would be injured by the mixture is to follow this crop, some means must be used to extirpate it from the soil. Swine will consume much of that lying on the surface, and light harrowing will cause the remnant to vegetate, and the first frost will destroy the young plants. Thrashing buckwheat upon the bare ground in the open field, is little practised as formerly. It is well, however that it be thrashed as soon as drawn in, or if this may not be, it should remain in the barn until freezing weather and it will thrash more easily.

The great end of buckwheat culture in this country is to furnish material for pancakes, which form a part of the winter breakfast of a large share of the population of the northern portion of the Union. They have become with many the established institutions of the country, and the "area" of whose influence is rapidly extending. Besides it is highly valued for feeding barnyard fowls. Mixed with oats and ground, it furnishes a cheap and good feed for horses, especially when not required to labor hard. Some dairymen recommend it as an excellent material for feeding milch cows.—Mixed with grain, it is excellent for fattening hogs, the bran being found to contain a large percentage of nutritive matter. One bushel of buckwheat is valued as being equal to two bushels of oats for cows or hogs.

In repeated statements of usual average crops we find 20 bushels per acre the lowest and 30 the highest estimate. The culture is not expensive, and the time occupied only about ten weeks.

The Turnip Fly.—By steeping the seed in salt water, the attacks of the Turnip Fly are partially or wholly prevented. Those who experimented last season mention it as a specific. In steeping the seed it is necessary to guard against injuring its vitality. Salt water made to a strength in which an egg will float, is the prescription; the seed to be afterwards dried previous to sowing. Farmers by experimenting with various steeps and dressings of the seed, may discover something practically useful. A solution of nitrate of soda, dissolved bones and Peruvian guano, is very suitable for the steeping of seed. A vigorous growth of the plant in the first stages will follow such

steps. Care, however, must be taken not to impair or destroy the vitality of the seed.—*North British Agriculturist.*

CULTIVATION OF TOBACCO.

It is important in the early growth of the plant, to plow and work the soil deep once or twice, so that when it is ripening, the ground will be broken deep and fine and be less affected by drouth; this should be done before the roots have made much progress. Hence, the advantage of greater distance between the rows is, it can be plowed and worked with less damage to the roots. In this as well as all other crops, if we wish a good return, we must be active with plow and hoe before the roots run out, that we may have the soil in a mellow condition for the roots to run into, not waiting for the roots to spread in the packed ground, and then breaking up the ground, roots and all, trying to pulverize the ground for the roots. On our high land we should endeavor, by deep plowing, to counteract the bad effects of drouth, and on our flat lands we should aim to prevent the collection of water by drains, discharging at the lowest points. From the time the plants are set out, the earth around them should be occasionally stirred with a rake or hoe; at first hoe flat, but as soon as the leaves assume a growing disposition, begin gradually to draw a slight bed towards the plants, which must be closely examined even while in the nursery, to destroy the numerous worms that feed upon them, cutting the stalks and gnawing the leaves when first set out. After plants are too big for the plow, finish stirring the ground with a hoe, by drawing up good hills around the plants. If the ground is broken and stirred deep while the plants are small, they will suffer but little from drouth.

PRIMING.

The object and meaning of this is, to strip off the under leaves of the plant that they may stand clear off the ground and not be injured. You commence priming when hoeing, and finish when you do the topping; the plants are primed from four to eight inches high, six is the most proper height; but when the plants are small, late in the season, it is better to prime only four inches. The object is, to have the leaves clear the ground. The prime leaves can be saved when of any size. When priming, leave a pair of leaves together, standing opposite on the stalk, and when topping, leave a pair at the top, standing the other way, that the stalk may be balanced, and have as many leaves on one side as the other.

WHEN TO DO THE TOPPING.

As the topping of the Tobacco Plant is all essential in order to promote the growth and to equalize the ripening of the leaves, I would observe, that this operation should, at all events, commence the instant that the bud of the plants show a disposition to run up to seed.—It is topped two to three feet high, and performed by nipping off the bud by the aid of the finger and thumb nail; washing the hands after this in water is sometimes necessary, as the acid juices of the plants otherwise would soon produce a soreness of the fingers.

In topping, leave from eight to sixteen leaves, according to circumstances and condition of the plants and the lateness of the season. The less leaves you leave the larger they will grow and the sooner ripen. I consider from ten to fourteen leaves the most proper number to leave on; though some planters prime to six inches and top to eight leaves. When your plants are small and the season is far advanced, prime less, and when your tobacco is large and on extra rich ground, top higher, remembering always to leave on about what you think will have time to ripen.

SUCKERING.

After the plants have been topped, the buds in the axils of the leaves push forth with great vigor, and must be pinched or broken out as fast as they appear, so that all the strength of the sap will go into the leaves.

WORMING.

The tobacco worm, which feeds upon the leaves comes from the egg deposited on the under edge of the leaf by the hawk-moth, sphinges or hornblower. That begins to fly the first of June or perhaps sooner. This moth is large, and has somewhat the flight of a small bird, quick in its motions, and not very shy. It is of an ash-grey color, having two sets of wings. The spread of its wings is from three to five inches. It flies about at dusk seeking its food, which is honey, from various flowers open at night. It visits potato blossoms, and is particularly fond of the blossoms of the Jamestown weed. The more of these moths that are killed, the less will be worms. The moth can be knocked down by watching near the flowers mentioned. The fields should be examined every other day, or at least twice a week to gath-

er the worms. It is easy to be seen where the worms are making fresh cuts, and they will be found on the under side of the leaves. If turkeys visit the field early in the morning, they will destroy a great many worms. The tobacco worm grows very large and looks very ugly. They are generally killed by pinching them between the fingers. It would be less disgusting for each one to carry a bag or pocket fastened to the side, and bag them for chicken meat. The most suitable persons to do the worming are children from ten to fourteen years old. They can be encouraged by giving premiums to those that gather the most worms. There is also a small worm which attacks the bud of the plant, and which is sure destruction to its further growth; and some again, though less destructive, are seen within the two coats of the leaf feeding, as it were, on its juices alone.—*Tobacco Grower's Guide.*

THE FARMERS' GRINDSTONE.

BY SOLON ROBINSON.

The grindstone is not such an unimportant subject as some persons, without reflection, may think. What could a farmer do without it? In fact, it is, instead of being unimportant, the most important implement ever brought upon a farm. Show me a farmer that does not own a grindstone, and I will prove to you by a thousand witnesses, if any other is needed, out of his own mouth, and upon his own farm, that he is a poor, shiftless, thriftless fellow. Pray tell me what more pitiable thing, what more derogatory to his character and ability to live like a a man among men, could you say of one who claims the name farmer as the justly proud prefix to his own cognomen, than to say, "Poor fellow, he has got no grindstone." Some person has said that he could measure civilization by the quantity of soap used. I can measure it by a better test—it is the grindstone test.

When I was an early settler—so early that I had no white neighbors—in the northwest county of Indiana, and no customers for merchandize but the wild Potawatamie Indians, who were a very dirty, uncivilized tribe—the last, you would think, ever to wash themselves—I sold them a bar of soap, but never a grindstone. At a later period, I had a good many white customers, civilized ones, as was proved by the fact that, while I was selling one box of soap, I sold a whole wagon-load of grindstones.—These were sharp customers; they bought the means to sharpen their axes, chopped their own wood, and burnt it upon their own hearthstones, and made their own soap. Soap may be an evidence of civilization; it is not a certain one, but the grindstone test never failed. If his grindstone is all right, so is everything else. If it is an old shackling affair, hung with a loose wooden shaft, and rotten crank, with a limb of an apple tree for a handle, upon a frame propped up, one corner on a dilapidated stone wall, without a trough to hold water, and with a woe-begone squeak and a groan when it is put upon duty, you need not look any further after that man's character. He will grind it out for you, if you will turn, upon that miserable excuse for a grindstone.

Do you happen to know a fellow who is notoriously a poor, miserable, slack, slow, and every sort of a nobody, you may set it down as gospel truth that he don't own a grindstone—nor even that miserable excuse for one mounted upon the dilapidated frame that leans against the old stone wall; no, not even one that runs upon notches cut in two fence rails leaned against the back side of the house, or resting across the corner of the pig-pen, the fac-simile of which you can find in a thousand hills and vales throughout this land of civilization, Fourth of July patriotism, and grindstones. Talk about your mowing and reaping machines, your sharp scythes, and keen axes; not one of them could be made or kept in order without the grindstone. Tell the farmer about the advantage of sharp spades and hoes, but how is he to keep them sharp without this most indispensable of all implements, the grindstone? Talk about the discomforts of a smoky house and a scolding wife! That is not the real cause of the scolding: it is a dull axe. You don't pitch into that hard-seasoned old log, that contains some of the best fuel in the world, but go to work like an uncivilized Potawatamie, and knock up some old rotten wood with your dull axe; and that, instead of a fire, makes a smoke, which sours the good wife's temper, which finally, if the wood does not, bursts into a flame, when she attempts, with a dull knife, to cut meat for the breakfast of a poor, shiftless, good-for-nothing fellow, who is trying to live in the world without a grindstone!

You have all heard of that figure of speech: grinding the face of the poor. It ought to be made a reality upon every poor fellow who keeps such a grindstone as I have described upon his premises. I would grind him until his

wits were sharpened sufficient to get a better grindstone. There is another old saw: holding his nose to the grindstone. I can almost feel the scab on mine now, from the early and cruel holding of it, when I was a boy, over one of those hard-hearted men, because they will stand an immense amount of burning without wearing away. It is no matter that they wear away the soul of the boy at the crank; he is a hired boy, and what business has a hired boy to have a soul! And if he has, it was hired to wear away, while the grindstone costs money. So does the time that is wasted; but the old fogy that owns the grindstone has not soul enough to appreciate that; and so year after year he wears away the precious jewel upon his miserable old hard-hearted grindstone.

Will men ever learn what an abuse this is of a good thing? Will farmers allow me to press upon them to think that they never had, never can have upon the farm, a piece of machinery of so much importance, one that pays so great a percentage upon its cost, as a first-rate grindstone. A grindstone, did I say? I might say a dozen; for there are may farms where it would be the height of economy to own a dozen, of various shapes and sizes, of various qualities, adapted to various purposes; some stationary and some portable, some driven by steam, water, horse or dog power; some turned by hand, and some rigged with a treadle, so as to be turned by the foot; but no one, great or small, should ever be hung upon a wooden shaft, or ever give a squeak when turned. In fact, the grindstone should be kept as well tuned as the piano; and no piece of machinery should be made to run smoother, and none ever did run smoother than a stone, well hung upon well oiled friction rollers—just such a one as every good farmer has already, or will have as soon as he reads this discussion upon the uses and abuses of the grindstone.

Slippery Soles.—It is well-known by all hay-makers, that the soles of boots or shoes, in the hot dry weather during haying, become smooth as glass, and full as uncertain for a foothold, as well as dangerous an the top of a load, or in ascending and descending the mows. Now, to remedy this evil, I take the soles from a pair of cast off rubber shoes, and tack them to the bottoms of my boots. Since this has been my practice, I have at all times known where to find my feet when I put them down.—*Ex.*

HOW to FORETELL the WEATHER.

In a manual of the *barometer*, compiled by admiral Fitzroy, and published by the Board of Trade, are the following useful observations.

Whether clear or cloudy, a rosy sky at sunset denotes fair weather—a red sky in the morning bad weather, or much wind, perhaps rain—a high dawn, wind; and a low dawn, fair weather. Soft looking delicate clouds, foretell fine weather, with moderate or light breezes—hard edged, oily looking clouds wind. A dark, gloomy blue sky, windy, but a bright blue sky, moderate fine weather. Generally, the softer clouds look, the less wind, but perhaps the more rain may be expected; and the harder more 'greasy' rolled, tufted, or ragged, the stronger the wind will prove. Also a bright yellow sky at sunset presages wind; a pale yellow, wet; and thus by the prevalence of red, yellow, or grey tints, the coming weather may be told very nearly—indeed, if aided by instruments almost exactly. Small inky looking clouds foretell rain; light scud clouds driving across masses show rain and wind; but if alone may indicate wind only.

High upper clouds, crossing the sun, moon, or stars, in a direction different from the lower clouds, of the wind when felt below, foretell a change of wind. When the sea birds fly out early and far to seaward, moderate and fair weather may be expected. When they hang about the land, or over it, sometimes flying inland, expect a strong wind with stormy weather.

There are other signs of coming change in the weather known less generally than may be desirable, and are, therefore, worthy of notice—such as when birds of long flight—rooks, swallows, cranes, and others, hang about home, and fly up and down or low rain, and wind may be expected. Also, when animals seek sheltered places, instead of spreading over their usual range; when smoke from chimneys does not round readily, or start upwards during a calm, an unfavorable change is probable.

Dew is an indication of fine weather, so is fog. Neither of these formations occur under an overcast sky, or when there is much wind. One sees fog occasionally rolled away, as it were by wind, but seldom or never formed while it is blowing.

Bow Window.—A young lady, whose father is improving the family mansion, insists upon having a bean window put in for her benefit.

NEIGHBOR WHITNEY'S WHEAT.

My neighbor Whitney is a thinking man, and I belive generally thinks pretty accurately; the beauty of his theories are their simplicity, and the most admirable feature of his conclusions, their naturalness. Every man that plants or sows, wants to raise a good crop of course; but in order to do so, he must not try to raise more than one crop at a time on the same piece of land.

Passing a neighbor's garden last midsummer, "Mr. Cooper," said I, "have you not lived here long enough to know that you cannot raise two good crops at a time on the same ground? If you want to raise a crop of weeds, why don't you set apart a portion of your garden, manure it well and plow it thoroughly, and then let it alone. The seed is already in the ground; they will germinate, spring up and grow, and you will have a fine crop without any further trouble. Then plant the remainder of your garden, having previously manured it well, cultivate it thoroughly, not allowing a weed or anything else to grow, but the thing you plant, and you will have a good crop." Now this is very plain and simple logic, and the conclusions irresistible, and yet how few, how very few there are who realize and act upon it.

With these preliminaries I will now state a few facts in relation to neighbor Whitney's two acres of wheat. Two years ago, after planting, he drew, if I rightly remember, fourteen loads of barnyard manure on to about an acre of land. The wagon box was 14 feet long 20 inches high, and the manure well laid on. He immediately broke up this acre, and about the same quantity of land adjoining, without manure. Now, he says, all our lands are constantly taxed with the support of two crops, the surface with a crop of vegetable life (grass) and below the surface a crop of animal life; in other words, myriads of bugs, worms, &c, feeding upon the roots and fibres of the grass or vegetable life.

From these premises, he reasons, that if he wants a full crop of wheat he must not only destroy this vegetable life, but the animal life also. And as the animal life must cease when its support, the vegetable life, is destroyed, it demonstrates at once the importance of timely and thorough cultivation. Upon this principle he plowed and thoroughly dragged his two acres every two or three weeks till sowing time. He estimates that at the time of sowing there were no roots or fibres or seeds of vegetable life in the soil, other than what naturally inheres in the soil, or is to be found in a traveled road track, and no animal life, except such as can live upon dirt, or without food, if any such there are. He sowed his wheat broadcast about the usual season, dragged it in, and I think rolled it.

At his request I went through it with him shortly before harvest, and also a piece of rye adjoining, that had been treated in the same way. My height is 5 feet 10 inches, and the manured wheat was the tallest, with heads from four to six inches long, and a full round, plump berry. He intended to have it gathered, threshed and measured by itself; but with a large landed estate, and no help but the representatives of the lower class of "sweet Ireland," and a large saw-mill cutting 20,000 feet per day, he could not attend to it. Those accustomed to wheat growing can judge better of the probable yield than I can; but I have seen wheat that was said to have produced 40 bushels to the acre, and it was not as tall or thick, or as well headed, that without manure, but with the same cultivation, was as good in proportion. —*Cor. Rural American.*

LOSS OF QUEEN BEES.

Soon after they swarm, the queens, when on a bridal trip, and enjoying the society of the drones, as they course through the air, becomes so intoxicated with their amorous enjoyment, as to be confounded on their return, not recognizing their distinctive homes. They mistakingly land on a foreign colony, only to meet a sudden death by the subject of a queen whose jealousy prompts them to the attack. Should we inspect a hive about this time and find no eggs or brood, it is a proof positive that it has no queen. The usual time for this is about twenty days after the issue of the first swarm. Again, if the bees allowed the drones to remain in the hive long after the general masscare —say to the first of September or October—It is a never failing sign that the queen is wanting, or that she is in an unhealthy condition. In such a state the stock should be supplied with a queen immediately, or united to another. —*Flanders.*

If fertile lands are not cultivated, their fertility won't crop out.

For the Ohio Farmer and Cultivator.

A MINUTE INSECT.

In the garden of MICHAEL SIMON of this place is a small spot of ground, about six inches in diameter, entirely covered with exceedingly small insects. At times they are quite numerous at other times they nearly all disappear. At a few feet distance they appear as if a fine powder was scattered upon the ground. Upon a nearer approach they are seen to move among themselves but do not change places. Their color and appearance resemble finely pulverized gunpowder. When placed upon the land they hop about like a flea. They are so exceedingly small that it would require at least one hundred to equal the size of a timothy seed.

Mrs. SIMON informs me that she has poured hot water upon them but it has no effect. To use her own expression. "They are like lampblack, they will not mix with water." To all that have seen it, it is a stranger. No injury has been done by it thus far, What are they?

L. W. SECKLER.

Boardman, July 8th, 1866.

HINTS TO FARMERS.

Little GRIS, the funny lecturer on Hunkadora, perpetrates the following Hints to farmers, through the Cincinnati *Times*:

WHAT HOES TO USE.—In planting or hoeing corn use the ordinary hoes in common use. Neither India rubber hose nor cotton hose would be of no account in a corn field; no more would one of *Hoe's* eight-cylinder presses.

HOW TO HOLD THE PLOW.—Don't try to hold it out at arms length. You can't do it.

If you hain't a plow of your own, get out an attachment on your neighbor's who owes you. Any Justice can tell you whether you can *hold* it or not.

THE BEST TIME TO PUT IN RYE.—I asked an old farmer once what was the best time to put in rye? He looked at his watch and replied:

"This is about my hour."

The rye was immediately put in.

All seasons are the same for putting in rye.

HOW TO KEEP CORN.—the best place to keep corn is in a good corn house, though some prefer to keep it in their system—*in the juice*. If they don't keep corn they keep *corn'd*.

FENCES AND FENCING.—Good fencing is essential on a farm. Get a good "fencing-master" to learn you. A *rail* fence is better than an imaginary one. You can't repair a *worm* fence by taking vermifuge. Neither can you cut good whitewash brushes out of *brush* fences. Mintzer can tell you that.

TO MAKE YOUR STABLES WARM IN WINTER.—Set fire to them.

TO DRAIN LANDS.—Drink whisky, and spend all your time at the village tavern. This will drain you of all your land in a very short time.

EASY WAY TO DRAW SAW-LOGS.—Draw them with a crayon pencil. After a little practise you will be able to draw the largest kinds of saw-logs with ease.

CLOTTED CREAM IN ENGLAND.

In a late letter from Cornwall, England, Mr. WILLARD of the Utica, N. Y. *Herald* writes of the way they make clotted cream in the Cornwall dairies for the London market:

The dairy house is of stone in connection with the dwelling—stone floor and stone benches for the milk to set, and all well ventilated and scrupulously neat and clean. The milk, at this season of the year, is strained in large deep pans, and put in the dairy house, where it stands from eight to ten hours, when the pans are taken out, and the milk scalded by placing the pan in an iron skillet filled with water and placed upon the range. At the bottom of the skillet there is a grate on which the pan of milk rests, so as to keep it from the bottom and from burning. The milk is here slowly heated, until the cream begins to show a distinctly marked circle around the outer edges, when it must be immediately removed. Some experience is necessary in applying the heat to have it just right, otherwise, the cream is spoiled. When properly scalded, the milk is removed to the dairy, where it stands from twelve to twenty-four hours, according to the condition of the weather, when the cream is removed, and is in a thick, compact mass, very much unlike our ordinary cream. It is considered a great delicacy, and is largely used as a dressing with sugar upon pastry, pudding, and especially upon gooseberry pie. As it is made an extensive article of commerce at the towns and villages, and is really a delicious article of food, I have been particular in describing its production.

PUNCTUATION.—Voltaire said of Mademoiselle de Livry: "She was so beautiful that I raised my long, thin body, and stood before her like a point of admiration."

For the Ohio Farmer and Cultivator.

HOUSE-KEEPING WITHOUT SYSTEM.

Old Mrs. Danby stepped quietly up to her daughter Lucy, who was sitting beside me in church, and I heard her whisper in her good noisy way, "Why Lucy, the two Miss Ruthvens and Annie Miles are going home with us in the big sled to stay and spend Christmas, and you know we left every bed unmade, and the chambers ain't been swept for a good spell, and and there is not one clean table cloth, and not a bit of bread baked; so you'll have to hurry home and slick things over a little, and I guess as for the table cloth, we can shift along with just the cover, or that spread on the big stand." And with a troubled look, Lucy hurried home on foot through the snow, "to fix up things."

One summer long ago, I boarded at a house (not a home) that was almost like living one summer of girlhood over again; for it was so like the times we children had in our play-house when a beehive served for a table, a seed cucumber for a churn, splints for cutlery, moss for carpets, and ears of corn for babies. The mother had a round dozen of saucy, big and noisy, ever-hungry children; the eldest called her "the old woman," while the smaller ones the disrespectful Mam, instead of the reverent title, Mother.

There was no system, and household affairs hung at loose ends; no day of the week set apart for washing, and it came as often on Saturday as Monday. On Sabbath morning the shirts had to be ironed, and sometimes, because it was a holy day, the little ones' clothes would not be ironed—just rubbed across a chair back to smoothe the wrinkles out a little.

The cream was rarely churned until it was a sour mixture of curdled milk and whey. There were no set days for baking, and the yeast was hardly ever renewed with boiling hops, but plenty of saleratus was made to answer an unwholesome purpose. The children went to bed and got up when they pleased, and very often the whole family were yet boisterous and wide awake at one o'clock; and in such cases an extra supper was deemed necessary, and hot coffee and warm biscuit were duly relished.

Breakfast was served between six and nine, and after breakfast the mother would take the pails and walk a winding up-hill half mile, to do the milking, and the husband accompanied her to keep the biting flies off the cows, and carry the milk home, unless he could make one of the children go instead. Dinner was never ready at noon, and supper came somewhere between five and nine, just as it happened.

If the mother or daughters were going abroad, they would have to wash a white handkerchief first, or a pair of stockings, or sew up a rip in a hastily made dress, or run a tuck in a too long skirt, saying "it will do for this one time," while in fact these galloping stitches were always found to do, and so they remained there.

When the winter winds came and found the little red ancles bare, they did not find warm, wooly, well-kept stockings waiting, and the mother was so hurried and thronged with work that they had to wear old ones with the heels missing. The little shabby petticoats had been stuffed in the broken windows, and the mice had happily destroyed them, and the mother could not just then stop to dye the white flannel red, and so she made them up white, and they staid so as long as they could.

Oh, that summer to me was a perpetual trial, and wear and tear of patience; but like the good old lady with the tasteless ale, I worried through it. I often came in at supper time so hungry, and instead of a neatly spread tea-table, found 'Mam' sitting, with her glasses on, in perfect contentment, reading aloud from an old school book, and the fire all out, and the children riding the shovel and tongs, and plowing with the chairs, and playing horse, and shooting hidden salamanders with the poker in the bounteous pile of ashes on the hearth.

And all over this world are there just such poor apologies of housewives; unfit for wives and companions—still more unfit for mothers. No wonder the glass is such a successful tempter, when there are so many cheerless homes, disobedient children, unswept hearths, and moving drones of wives and mothers.

But better than gold to me now, is the bit of experience that lies in the lap of that by-gone summer, that I can scarce see, away back and down a long vista of years—years crowned by a mingled garland of cypress and roses. Now that I am a housekeeper myself, and motherless

little ones look up to me lovingly, with little white heart-pages to be filled indelibly for life and for eternity, oh, that summer's rich lessons come home to me as a new found treasure.

ROSELLA.

For the Ohio Farmer and Cultivator.

THE POWER OF GENTLENESS.

I staid at Jones' last night. They are real clever folks, and I often go there. The little Joneses have grown to big Joneses now, but the same annoyances that will creep into families are so visible there that I often learn many things that do me good.

Now last evening, Reuben, everybody in the Dell knows Rube Jones, great bushy headed fellow, with a long, curling beard, through which he is always threadiang his fingers caressingly,—Reuben told his sister Ruth that if he ever heard her speak so curtly again, he would box her ears. That was hard talk. Ruth looked stunned, stared down at the floor a minute, her lip trembled, and to save an outright cry she hurried off to her bedroom and leaning her head on the window sill, took a real good womanly cry. Oh, my heart ached for the little woman! I call her woman, because this very act was weak, common, womanly, happening every day, all over our land among sisters of a larger growth, of wiser years.

Oh, this is the one sorrow of a woman's life that I most long to see rooted out. It is like a pestiferous weed in a flower garden.

Husbands, brothers and sons *must* be careful how they hurl their hard, clashing, cutting words into the delicate machinery that makes the mind of mother, sister or daughter!

Women have their own burdens and cares and weariness, and it is so inconsiderate for a man to add a feather's weight even by an unkind word, when a soft little "Oh, never mind," or "you are very kind," or "I thank you," comes in so good, and is gratefully received. If a woman is tired and irritable, it costs nothing at all for a man to say a word of praise; let him praise her appearance, or the flowers she has tended, or the bread or the butter, or the baby, and then see how girlishly pretty she will look down, with the old time dimples dinting her cheek, and the soft lovelight glistening in both her glad eyes.

Oh, you men folks are so chary of your kind talk! Women pine and starve on your very thresholds for kind words of good cheer, and praise; I am not ashamed to tell it. Oh, I've seen you, you great, broad shouldered and brawny armed men, the very ideal of robus and ripe manhood, eat slice after slice of nice white bread, wadding it down as though you were filling up a rat hole, and instead of saying to the tired, thin little creature who sat at the head of the table, not eating but anticipating your wants, "excellent bread," or "what fine loaves your honest little hands can make!" would growl out between your broad bites, "crust a little tough like, aint it?"

I am often glad to see the frail helpmeet drifting away "to that green shore where the weary are at rest."

I wish I could gather all your tired heads and tearful faces to my bosom and comfort you with abiding words of good cheer. I know my talk is homely and crude, but I give it out of the abundance of my heart. When I have time I will write again, if the powers that be desire it. ROSELLA.

Sylvan Dell.

For the Ohio Farmer and Cultivator.

HOUSE FLIES.

The fly season is about coming in, and it is time to think of making fly bushes. Flies are quite a pest and all families who have much cooking to do must have more or less. They love to be where they can get plenty of light and plenty to eat. It will be a good idea for little girls to be smart in washing up the dishes for it will keep some away, and we ought to slight them as much as possible, and not give them too much to eat. I don't believe the old woman I heard say that she was much alarmed because there were so few flies that season, for she said "it will surely be sickly."

I dislike the idea of poisoning flies and have them constantly dropping dead upon a cleanly swept floor, and into the eatables. I think if we cannot get rid of them any other way we had better keep them. I consider them the most troublesome in the fall, but if we leave the windows open the first frosty nights we can by sweeping them down and committing them to the fire, become almost rid of them in a few days, where otherwise they would remain several months.

These little tormentors are always ready to get the first of every thing that comes upon the table and for this reason we should be al-

ways prepared with fly scares. I think the best for that purpose are the old fashioned paper ones. Peafowl feathers are pretty but not good. It always seems like wasting time to go out and hunt a brush every meal, as some cooks do; it would take much less time to make a neat paper one. Any man can make a stick to fasten the paper on; but what makes a nice one is an old parasol handle, almost ev ery family has some. Take either a newspaper, or red, white, and blue tissue paper. After you have it cut in strips about half an inch wide, take a dull knife and curl each strip by taking the paper slanting between your knife and scrape it or crimp them at the ends. It has always been my lot ever since I was old enough to use a needle to make the much needed fly brushes, and yet there may be better plans than mine for making them.

FARMER'S LITTLE WIFE.

Fairfield Co., July, 1866.

For the Ohio Farmer and Cultivator.

ABOUT DAMP HOUSES.

Did you ever see the beat of this rainy season? Why the little brook that runs through our Dell, and in the summer hardly ever leaves a pool large enough for a pollywog to ripen in, has been an ambitious little river all the season, and comes up, taking a swell over the meadows and cornfields, quite overdoing the business of water cure.

I was saying before Pa, a while ago, that I wished it would stop raining; when he said, as women folks need not complain, as we could stay in the house and keep dry: which shows just how little these men know of housekeepers' troubles. Keep dry, indeed! I wish we could. Ours is a brick house, and before we knew it, the damp had invaded every nook and corner, drawer, clothes press and chest; and if toad stools had not actually begun to grow on the pillows of the spare bed, it was not for want of suitable "elements," as I believe would have been shown, if we had had an agricultural chemist to make an analysis. Now don't laugh at this, and think I would suffer our spare bed to get—to get—*dirty!* for everything was put on span clean, and not a fly or spider, or a particle of dust are allowed in that room; but it was just *damp*, real thievish *damp*, that gets into rooms somehow, much as the spirits do, and much more troublesome than they.

When I found everything about the house was getting mouldy, I concluded it was time to be doing something; so we overhauled all the drawers and closets, and spread the things out to dry. And then we made another discovery, the paper on the walls was wet and mouldy, and in some of the rooms the damp stood like fine dew on the surface. Here was an enemy we had never thought of guarding against at this season of the year, but we determined to make thorough work of it, and drive the intruder from the house. So we filled every grate and stove and fireplace in the house, with the best fuel we could get, and soon had rousing fires. We set the doors and windows open, and kept up the fires all day; then the next morning we opened the house again, and started the fires, and let them go down at noon, and the air cool off before night; and such an improvement I would not have believed possible. The air in the rooms, which was before oppressively heavy, was now as light and elastic as on a May morning, and it made us feel young and lively again. If the heavens continue in this weeping mood, we shall resort to fires as often as we find the damp getting to be troublesome.

Hazel Dell. SUN BONNET.

TROUBLES.

Some people are as careful of their troubles as mothers are of their babies; they cuddle them, and rock them, and hug them, and cry over them, and fly into a passion with you if you try to take them; they want you to fret with them, and to help them to believe that they have been worse treated than anybody else. If they could, they would have a picture of their grief in a gold frame hung over the mantleshelf for everybody to look at. And their grief makes them ordinarily selfish—they think more of their dear little grief in the basket and in the cradle than they do of all the world beside: and they say you are hard-hearted if you say "don't fret." "Ah! you don't understand me—you don't know me—you can't enter into my trials."—*Blind Amos.*

Pride is as cruel a beggar as want, and a great deal more saucy. When you have bought one fine thing, you must buy ten more that your appearance may be of a piece. It is easier to suppress the first desire than to satisfy all that follows it.

Discretion in speech is greater and better than eloquence.

For the Ohio Farmer and Cultivator.

HOMES AND HABITS TO LOVE.

BY MARY A. DURFEY.

Every one loves a tidy orderly house, where all things have their proper place, and are kept there. It contributes much to the inviting comfort we always look for, and which mainly constitute a true home, besides adding vastly to the ease and satisfaction of entertaining friends, rather than the mishaps and chance arrangements that unexpected visitors sometimes cause. And this difference in homes is owing entirely to the cultivation or neglect of one little habit. Still it is not uncommon to hear young ladies remark, when viewing the neat appartments of another, where every garment has its place—a bag for stockings another for pieces, a box for shoes, and bureau drawers in perfect order:

"Oh, I wouldn't be so particular for the world; it's so old maidish, and besides keeps one fussing all the time."

It is a very easy way to be sure, to toss off one's things in a heedless manner when returning from a walk, but should we not rather dread the fuss—if they were required in a hurry—of searching the house for a mislaid collar, putting on a wrinkled shawl, and finding kid gloves, instead of being neatly stretched and laid in a box after wearing, rolled up and squeezed one into the other, like a pair of worsted ones?

Good-hearted, well-meaning girls, who bestow the utmost attention on their toilet when dressing for company, and gain the admiration of young men for their good taste would not long retain such admiration if those young men should chance to see the rooms they had left, and all because they consider it too much trouble to be orderly. One gaiter here another one there; clothes hanging upon the bedpost, dresses discarded because of a rent or little bad fit, that a half an hour's work would reform; and brush and combs scattered about the toilet table. Then returning late in the evening, by following up this careless habit, the finer clothes are tossed over a chair, because too tired to take care of them then, and often remain so for days, exposed to injury and ruin. And the evil does not stop here; it will strengthen and continue through life, a constant source of fretfulness and disorder.

Acquire good habits girls! They are treasures we cannot estimate by dollars and cents, and the way is so simple, I'll tell you by an incident in my own life:

I ran home heated and tired from school, one day, and taking off my bonnet, was about to throw it on the table, when a gentle hand was laid on mine, and a calm, impressive voice said:

"Mary! now you have it in your hand, it is just the time to put it in its place."

For the Ohio Farmer and Cultivator.

"COUNTRY JAKES."

How often does a farmer hear these words from the lips of some boy as he enters the city or even village to transact business—"There goes a Country Jake"—"You would'nt catch me being a Country Jake," and many other similar expressions, as though he thought it a disgrace to be a "Country Jake," as he calls them. Now let us for a moment consider, what are the principal aims of life? They might be divided into three classes: 1st. Health—2d. Character—3d Prosperity. Go ask your family physician where he treats the most patients. Go inquire of the directors of County infirmaries, of State Asylums and of Hospitals, where the most applicants come from, and you will invariably obtain the same reply "from the Cities." In looking over the report of the Long view Asylum of Ohio, wherein 1181 patients are treated, but a very little over 100 were farmers and tillers of the soil, making about 9 per cent. from the country. Why, common sense alone would teach you that the country is the healthiest, where a person has pure air to breathe, pure water to drink, and fresh vegetables, fruits, and grain—the air filled with fragrant odors from the mignonette and sweet alysium from the neighboring garden, instead of the impure air of the City filled with the noxious odors of the cigar and whisky bottle and where you are penned up beneath the reflection of the noonday sun against the massive walls with scarcely a breath of stirring air to carry the heat away—where you have to eat such vegetables and fruit as the farmer brings you after he has selected the best for his own use.

Proceeding to our second division, Character—What is character? Webster defines it as the properties or qualities belonging to a person which are admired and esteemed. But this leads to another question—What qualities ought to be admired in a person? Is it the smoking of cigars, drinking of strong drinks, swearing, pilfering, &c.? No indeed! not by

any means! But where do you find the most of these carried on—in the City or Country? You might ride through the country for half a day and scarcely hear an oath, but you can hardly be in a city five minutes till you hear a horrible string of oaths which fairly make you shudder. Do you find rum shops in the country? No,—they can't afford it; nobody will buy their whiskey, and the poor fellows would starve. Now for the third and last—Prosperity. Prosperity consists not only in making money, but it is the attaining of high and honored positions. You town folks can beat us in making money, and you can beat us in spending money. But let us see where the greatest statesmen, authors, inventors, &c. were raised, Washington, Lincoln, Chase, Wade, Clay, and many others of the most noted statesmen were at one time in their lives "Country Jakes," as they are termed. So were Burns, Milton, Longfellow, Greeley, and most of your best authors. Take it in any way and on any ground you please except vice, and the "Country Jakes" beat every time. I am a "Country Jake" and I am proud of it, too. Jo.

Salem, Ohio.

For the Ohio Farmer and Cultivator.

MERCURY---ARGENTUM VIVUM.

Little brother Frank, who is our *petite* pupil, came down from his room this morning, wearing, instead of his usual smiling face, a countenance full of sadness. In reply to the question, "what is the matter?" he answered that he had accidentally broken his little mirror, his Christmas present, and that he was "so sorry." He was not suffered to grieve long over so trifling a mishap. This accident suggested a few thoughts which enhanced the interest of the morning's lesson; for beside the text-books something must be introduced to relieve the monotony, and thereby prevent the hours of study from becoming wearisome.

The important ingredient, Mercury, which helps to form the amalgam for coating mirrors, presented a subject of such interest, that while talking about the properties and uses of this wonderful metal, all traces of grief disappeared.

Quicksilver—*argentum vivum*—so called because of its fluidity, is the only metal which at an ordinary temperature exists in a fluid state. It is found native in Spain, Peru, Mexico and California. In density it corresponds to the noble metals, gold, silver, &c. Its color is a very brilliant silver white, which does not change by contact with the atmospheric air. Although it is a fluid at an ordinary temperature, it can be solidified or frozen by means of artificial cold, and when thus solidified, it is as malleable as lead. It congeals at forty-four degrees Fahrenheit below, and boils at six hundred and sixty degrees. Its mode of crystallization is in cubes. Owing to the peculiar properties of Mercury, its utility in the arts renders it invaluable; and in pharmacy it is extensively used. Its range of affinities is such that many useful amalgams are formed by its combination which other metals. Combined with tin the amalgam is produced which gives to the mirror its reflective powers. The looking glass, both because of its beauty and convenience is an indispensable requisite among the household goods. By the agency of mercury then we are enabled

"To see oursils as ithers see us."

This however is not the least wonderful of the many properties of this magic metal.

From the mirror to the parlor table,—the daguerreotype of a dearly loved friend suggests that the impression of the familiar face, so true to life, was fixed upon the polished surface by submitting the plate when removed from the camera, to the vapor of mercury; prior to this there was nothing to be seen but a blank surface; but from this brief operation, as if by enchantment, a countenance sprang into being.

Another peculiarity of mercury is, its uniformity in the rate of expansion from its boiling to its freezing point. It is this property which fits it for a thermometric fluid, a purpose for which it is extensively used. The susceptibility of this metal to the changes in the temperature enables us to ascertain the degree of heat or cold of the atmosphere. Just now, as the hot season opens, mercury, and indeed that solidified metal, gold, is on the rise.

By the use of quicksilver in the barometer, the atmospheric air can be weighed, and the height of mountains ascertained. The latter is readily accomplished because the density of the air from the base to the altitude of the mountain diminishes; hence the pressure upon the barometric fluid becomes correspondingly less.

It was by the agency of mercury that the constituents of the atmospheric air were ascertained. This discovery of a century ago proved an important development in the science of Chemistry.

The utility of mercury in gathering gold from fine soil and sand is well known. When the liquid metal is poured into a vessel where the precious dust is washed, its greediness for the shining particles is such that it soon searches them out and secures them in a mass, separating them from soil and sand. The mercury is readily parted from the gold, and can be again used to search out more dust, as the metal is not impaired in the process.

In pharmacy quicksilver is used in various ways. Its combinations are numerous. With nitric acid, nitrates are formed. When the nitrate of mercury is heated, it is decomposed, and a brilliant crystalline powder is produced, which forms red precipitate, a very poisonous irritant and escharotic.

There are two important chlorids of this metal. The first is the sub-chlorid, or calomel, a compound once popular with the Esculapian fraternity. This chlorid is obtained by precipitating a solution of sub-nitrate of mercury with chlorid of sodium—*common salt.* The powder which falls is white, insoluble and tasteless. Its insolubility distinguishes it from the chlorid of mercury, which is corrosive sublimate. This poisonous preparation is obtained by decomposing the sulphate of mercury with the chlorid of sodium.

Besides the nitrates and chlorids of this liquid metal, there are iodids and sulphurets. The sulphuret, Hg. S, or cinnabar, is produced by treating the red oxid of the metal with sulphureted hydrogen. The result is a black precipitate, which, when sublimed, forms the well known pigment, vermillion. Cinnabar is also found native, in small beautiful crystals, and also in amorphous masses, of different shades of red and brown.

The peculiarities of mercury are so marked, that it is not strange that the alchemists for long years supposed it to be enchanted silver, and because of their error, wasted much midnight oil in the effort to transmute the *living metal* into the solid material, *argentum.*

MARY DAY.

On the Farm, June, 1866.

Some writer has said that a fixed idea is a sort of gimlet; every year gives it another turn; to pull it out the first year is like plucking out the hair by the roots; in the second year, like tearing the skin; in the third, like breaking the bones; and in the fourth, like removing the very brain itself.

SUMMER.

BY AUBREY DE VERE.

Pleasant the swarm about the bough,
The meadow whisper round the woods;
And for their coolness pleasant now
The murmur of the falling floods.

Pleasant beneath the thorn to lie,
And let a summer fancy loose:
To hear the cuckoo's double cry,
To make the noontide sloth's excuse.

Panting, but pleased the cattle stand,
Knee-deep in water weed and sedge,
And scarcely crop the greener band
Of osiers round the river's edge.

But hark! Far off the south wind sweeps
The golden-foliaged groves among,
Renewed or lulled, with rests and leaps—
Ah! how it makes the spirit long

To drop its earthly weight, and drift
Like yon white cloud, on pinions free,
Beyond that mountain's purple rift,
And o'er that scintillating sea!

INDELIBLE INKS.

Gold ink is made by grinding upon a porphyry slab, with a muller, gold leaves along with white honey, till they become reduced to the finest possible division. The paste is then collected on the edge of a knife or spatula, put into a large glass, and diffused through water. The gold by gravity soon falls to the bottom, while the honey dissolves in the water, which must be decanted off. The sediment is to be repeatedly washed till entirely freed from the honey. The powder when dried, is very brilliant, and when to be used as an ink, may be mixed with a little gum water. After the writing becomes dry, it should be burnished with a wolf's tooth. Silver ink is prepared in the same manner.

Indelible Ink.—A very good ink, capable of resisting chlorine, oxalic acid, and ablution with a hair pencil or sponge, may be made by mixing some of the ink made by the preceding prescription, with a little genuine China ink. It writes well. Many other formulæ have been given for indelible inks, but they are all inferior in simplicity and usefulness to the one now prescribed. Solution of nitrate of silver thickened with gum, and written with upon linen or cotton cloth, previously imbued with a solution of soda, and dried, is the ordinary permanent ink of shops. Before the cloths are washed the writing should be exposed to the sun-beam,

or to bright daylight, which blackens and fixes the oxide of silver. It is easily discharged by chlorine and ammonia.

A good permanent ink may be made by mixing a strong solution of chloride of platinum with a little potash sugar, and gum to thicken. The writing made therewith should be pressed over with a hot smoothing iron to fix it.—*Ure.*

Nitrate of silver 1 to 2 dr.; water ¾ oz.; dissolve, add as much of the strongest ammonia water as will dissolve the precipitate formed on its first addition, then further add mucilage 1 or 2 drachms, and a little sap green to color. Writing executed with this ink turns black on being passed over a hot Italian iron.

Asphaltum 1 part; oil of turpentine 4 parts; dissolve, and color with printer's ink. Very permanent.—*Cooley.*

ANCIENT WATCHES.

Many inventions of the greatest value are sometimes the most difficult to trace to their origin. It is so with clocks and watches.—Neither the precise year of their invention, nor the names of their inventors can be confidently stated. Till the close of the tenth century, no other mode of measuring time than by the sun-dial, or the hour-glass, appears to have existed; and then we first heard of a graduated mechanism adapted to the purpose, this invention being usually ascribed to the monk Gerbert, who became Pope in 999, under the name of Sylvester II. These clocks were cumbrous machines; and it is not till the fourteenth century that we hear of portable clocks. In the succeeding century, they were much more common, and were part of the necessary furniture of a better-class house. They were hung to the walls, and their movements regulated by weights and lines, like the cheap kitchen clocks of the present day. The invention of the spiral spring as the motive power, in place of the weight and line, gave, about the middle of the fifteenth century, the first great improvement, which now went on rapidly, and resulted in the invention of the watch—a time-measurer that might be carried about the person.—*Book of Days.*

Canning Fruits.—Having made a long trial of all sorts of cans for keeping fruits through the winter, our good wife declares she will use nothing but tin, which she finds safer and better than anything else. The elasticity of the cans ensures them in being air-tight when once well sealed.

EFFECT OF A COMPLIMENT.

A comely young wife, the cynosure of her circle, was in bed apparently dying from swelling and inflamation of the throat, an inaccessible abscess stopping the way: she could swallow nothing; everything had been tried. Her friends were standing round her bed in misery and helplessness.

"Try her wi' a compliment," said her husband in an uncomic despair.

She had genuine humor as well as he; and physiologists know, there is a sort of mental tickling which is beyond and above control, being under the reflex system, and as instinctive as sighing. She laughed with her whole body and soul and burst the abscess and was well.

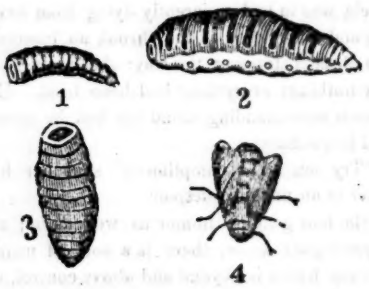
Angle Worms in Wells.—Many families find their wells badly effected without tracing the difficulty to the right cause. As soon as the soil becomes a little dry, the angle worms descend to a considerable depth in search of moisture. They will descend till they reach the hard pan or gravel below the soil. Attracted by the moisture they will frequently drop into wells and render them very offensive. We had a well in this condition, and the remedy was a very simple one. We had a trench dug around the well next to the stone work, about three feet inside and down to the pan. We filled this with gravel taken from the bottom of another well. Allow no top soil on the top of this gravel, and the work is complete. They will not dig through pure sand or gravel.—*Maine Farmer.*

Affection.—In the intercourse of social life it is by acts of watchful kindness, recurring daily and hourly, and opportunities of doing kindnesses, if sought for, that are forever starting up—it is by words, by tones, by gestures, by looks—that affection is won and preserved. He who neglects these trifles, yet boasts that whenever a great sacrifice is called for he shall be ready to make it, will rarely be loved. The likelihood is that he will not make it; and if he does it will be much rather for his own sake than for his neighbor's.

Food Cooled Quickly, will keep much longer than if cooled slow. Milkmen cool their milk quickly in order to have it keep well.

Every woman has a right to be what age she pleases—if she were to state her real age, no one would believe her.

Live Stock Department.



GRUB IN THE HEAD OF SHEEP.

Some time ago we fell in company with Col. SIMON PERKINS of Akron, who was some years ago largely engaged in wool growing in company with JOHN BROWN, who afterwards became famous in the Kansas troubles and finally ended his erratic career by a raid upon Harper's Ferry about the year 1859. Col. Perkins says that no man was better informed as to what made a good sheep than John Brown, and by the most careful observation and practise, he was equally skilled as a shepherd. Our conversation turned upon the subject of the Grub in the head of sheep, concerning which Mr. Brown had made very careful and protracted experiments, and Col. Perkins had verified the same by his own observation, then and since. Col. P. assured us that he knew from making trials, that the sheep bot-fly—unlike its cousin the horse bot-fly—does not deposit a nit or egg in the nose of sheep, but injects a *living worm* all ready to fasten itself upon the moist lining of the nostril and commence its career of aggression. This living worm deposited upon a dry surface soon dies for lack of moisture, but the sheep bot-fly is very dexterous in shooting her progeny well into the nostrils of her victim.

Having heard of these experiments made by Messrs. PERKINS & BROWN, in Dec. 1845, Mr. BATEHAM, then editor of the *Ohio Cultivator* at Columbus, requested Mr. Brown to write them out for publication, which he did in the spring following, as we here copy from the *Cultivator* of April 15th, 1846, page 59:

M. B. BATEHAM, Esq.—*Dear Sir:*—I noticed your call upon me in the *Cultivator*, (Dec. 15th,) but, as I very much dislike the too common practise of undertaking to enlighten the world with the results of experiments not fully made, and of undertaking to instruct others before we half understand what we write about ourselves, I had concluded to wait till I felt an entire confidence in regard to the remedy we have been trying for grubs, or worms in the heads of sheep. The use of tobacco water is no discovery of ours, and all we hope to do in addition to what has been before said and written, will be to give some facts in reference to the destructive insect in question, its habits, and the best time and mode of administering the remedy. The fly is not very correctly described in the *Cultivator*. It is of a light drab color, when seen hovering about flocks, and deposits a crawling maggot at the nose of the sheep. We have often taken hundreds of them, alive and active from a single fly, sometimes after the fly was dead; and in catching the flies in in our hands, with the moving worms ready to pass directly into the head, the moment they were lodged at the nose. One of my sons had them twice deposited at his own nose, while at work among the sheep last fall. The act of depositing is done almost as quick as lightening. The flies are at work during the summer and fall, till the weather becomes cold.

The worms when somewhat matured, will live for several hours in tobacco water as strong as ley, and in spirits of turpentine. The only chance of expelling the , is during their infancy, and before they advance high into the head; which they do not do, under five or six weeks after they are first deposised at the nose. There are two, if not more, sets in a year; we are certain of two, from finding matured ones in the heads of lambs not over four months old. We are not certain that two sets are not matured into flies, from deposits of the same season.

We commenced using tobacco water about the last of July, in the following manner: In the first place, we used the tobacco upon all but a part of the fat sheep which we intended to kill, marking those we did not use it upon, so as to distinguish them at once from those upon which it had been used. We only found a single worm in one of many heads we have examined, of those to which we applied the tobacco; and that one, was found in the cavity above the eye—I mean but one living one,—we found a number of dead ones in those heads—a thing we had scarcely ever met with before. We also found the membrane which lines all the cavities that connect with the nose, had a very clean and healthy appearance. The noses of

the whole flock immediately became clean, and have ever since continued to be more so, than any sheep I ever saw; and in fact, the entire countenances of the flock are changed for the better.

We next commenced killing the fat sheep, to which no tobacco had been applied, and found in several of their heads, a number of living worms of different sizes though not matured. The membrane or lining in those heads where worms were found, were inflamed, and swollen to three or four times the natural thickness, and the cavities filled to some extent, with pus, or mucus, or a mixture of both. Where no worms were found, the membranes appeared precisely as where the tobacco had been used. We took about this time one of those to which tobacco had applied, (some days before,) and charged his nose with hundreds of the little maggots, which we took out of some flies we had caught for the purpose. We killed this sheep about four weeks after this, and found his head warming with the little worms; but not one of them was above the eye. They were about three or four times as large as when put into his nose.

We went over our store sheep, applying tobacco to all of them, three times during the season; and as we have lost none of consequence since we began to use it, we began to think it about time to recommend the practise to others. Our flock are unusally healthy. We use a liquor as strong as one pound of tobacco will make a gallon of water when it has been boiled—that is, a pound will make a gallon fit for use. In using it, we turn the sheep on their backs, into a little trench dug in the ground, to help hold them still; and with the head held back on the ground, we inject, with some force, about a table-spoonful of liquid into each nostril, pointing the syringe so as to have the liquid pass into the cavities in the head, instead of falling into the windpipe, or the throat. If the animals appear to be sick, and are not able to stand for a little time, there need be no alarm; we have never injured one, in going over all our young and old, three times. Two persons will go through with several hundred in a day.

I am inclined to think, that the fly is much more numerous some seasons than others; and that, when they once get themselves quartered upon a large flock, they will be likely to stay with it, till they are destroyed in some way. I would recommend the burning of all the heads of sheep that die in warm weather, immediately, as the worms crawl out and become flies. I would use the tobacco twice at least, between spring and fall; and without fail about the last of October. To use it through the summer, will prevent the increase of flies, and assist the flock to commence winter in full vigor, and in better condition. Many are destroyed during the warm season; and many more, by being enfeebled, are doubly exposed to the fly in the fall, and are prepared to sink under it the next winter. I think every shepherd must have noticed the fact, that some sheep would remain unusually thin and poor during the whole season of warm weather; and fail to get in order by the use of best of feed. It may be found that tobacco will relieve some of them entirely; such has been the result with us.—JOHN BROWN. —*Akron, March*, 1846.

ABORTION AMONG COWS.

Mr. X. A. WILLARD of Herkimer Co., N. Y. who is on a visit among the dairymen of of England writes to the Utica *Herald* of a visit to the dairy of Mr. BULLMEN of Cornwall where he found that abortion among cows is of no unusual occurrence in that district, and Mr. BULLMEN remarked that it is always preceded by the foot disease or foot rot, or by foot and tongue disease. A year or so ago he had twenty or more that aborted, and has been troubled more or less for years. He advises immediate removal of the aborting stock from the herd, and thorough ventilation of stables, with freeuse of chloride of lime. He says it is important to get the herd in a healthy condition when foot rot makes its appearance, as abortion may be anticipated or is near at hand upon such farms as the cattle are thus afflicted. I am rather of the impression that foot rot precedes abortion in the stock of Herkimer and Oneida, N. Y. and the suggestion may be of some value to our farmers at home."

—There is a spice of probability in this idea as veterinarians are generally of opinion that both the above disorders may proceed from the same cause, viz. the eating of ergot on spurred heads of June grass. But it seems hardly possible that with all their investigations on this subject, the dairymen of Herkimer &c. should have overlooked this possible fact.

Dogs.—If a man keeps too many mastiffs, hounds, pointers, setters, terriers, his earnings will go to the dogs.

For the Ohio Farmer and Cultivator.

REMARKABLE COWS.

I noticed the report of Mr. GREER's cow, in the *Ohio Farmer* of June 23d. I thought the cow Giantess, owned by Mr. Brock of Highland county, was the greatest milker I ever heard of, but Mr. Greer's cow gives 2½ lbs. more than she did at the trial in June, 1854, when she gave 76 lbs. per day, of which it took 26 lbs. to make one pound of butter. She had given as high as 88½ lbs of milk per day previous to the trial. I had a cow in 1852 that gave 52½ lbs. milk, I believe, and made 3¾ lbs. butter in December. She calved again in March, 1854, and in April she gave 56 lbs. of milk, of which it took only 16 lbs. to make one pound of butter. We tried her twice with the same result. She was kept in stable, fed shorts, midlings and potatoes. She gave in May, after being turned to grass, 63 lbs. of milk in a day; no trial of butter. I do not think she would have made as much butter as she did in the stable.

Mr. Brock wrote me that he thought his cow could be made to produce 4 lbs. of butter per day. She was very large, weighing 2000 lbs when in high condition. My cow weighed 1250 lbs. I would like to have Mr Greer's cow tested in butter making.

Woodstock, Ill. WM. W. ELLSWORTH.

WORKING HORSES.

A horse worked, and a horse abused, are two different things. The latter treatment is common; and we see the result in the many horses that are prematurely worn out—dying at 18 when they should have lived and done good service till 25. Doctors are noted for rapidly wearing out horses. It is the hard labor they put them to, often independent of bad treatment. In such case, when not too severely dealt with, a horse will yield nearly the same amount of labor in a short, as otherwise in a longer time. If abuse is superadded, the period of service is still shorter—and this is the really reprehensible course. It is one of the most painful things to see a brute of a man beat and harass an intelligent horse.

A moderate, but continued use of a horse it is found, is of as much service to a man, as severe labor. Such a horse will not only last much longer but will do nearly the same amount of labor. The only requisite is, more time is to be given him—more time out of the week or the twenty-four hours. It will take a little longer to go the distance, to plow the field. A couple hours a day—and even one hour—will often be enough to avoid the *excess* which produces the evil. It is the small excess that generally does the hurt, the world over. A little less severity—not necessarily less labor—should be our aim. A horse will keep better, be less subject to hurts and diseases, thus saving a doctor's bill, and the time spent in doctering. Besides, a horse will be more animated, more cheerful and do his work the more readily and better.

We treat our horses too severely. A horse is a large investment of money—and when spavined or crippled is a serious loss. With care, this may be avoided. We should possess our souls in patience, and have mercy for our beast as well as respect for our interest. The two go together here. Moderate, but thorough, work is what is wanted, and there will be profit in the end.—*Rural World.*

COLIC IN HORSES.—A Wisconsin correspondent of the New York Farmers' Club prescribes this remedy for colic in horses:—Put the patient where he can lie down and keep as easy as possible. Saturate a blanket in boiling hot water and throw over the horse along his back and sides. Sprinkle salt on the back forward of the hips. When the blanket cools renew the application till relieved. The horse will stand 140 degs. of heat.

MILK FEVER IN COWS.—I observed an enquiry in the *Ohio Farmer* for a remedy for the fatality of cows after calving. The best remedy I know is to give two quarts of strong hop yeast just before calving, and afterwards give two quarts three times a day for two or three days; then if the cow seems well, taper off by giving it once or twice a day. It may be given in a little wheat bran. It is necessary to milk the cow for some days before she has her calf in order to prevent throwing her into a fever, especially when high in flesh and running on pasture.

W. B.

Guernsey Co., Ohio

COLLECTING A BILL.—"Here's your money and now tell me why your rascally master wrote eighteen letters about that contemptible sum?"

"I'm sure I can't tell; but, if you'll excuse me, sir, I guess it was because seventeen didn't fetch it."

The Poultry Department.

For the Ohio Farmer and Cultivator.

DOMESTIC POULTRY---DUCKS.

BY J. C. COX, OSBORN, GREENE CO., O.

This species of water-fowls comprise several varieties or breeds, most of which are well known to the naturalist and poultry fanciers. This part of the poultry-yard is not subdivided into so many breeds and names as the *Gallus*, heretofore considered, but late discoveries and importations are increasing the numbers.

It is almost useless to name and describe the number of varieties of wild ducks; among the most prominent are the *Mallard*—undoubtedly the origin of our common and other ducks; the *Wood*, or *Summer* duck, well known and prized for its gorgeous plumage; the *Canvasback, Red Headed, Hook-billed, Penguin* and *Pochard;* the beautiful little *Buenos Ayrean* or *East Indian*, lately domesticated, is found wild in South America and the East Indies; the well known duck under the name of *Muscovy*, (properly called *Musk*,) of several colors, was originally and is now found wild in South America, mostly in Brazil. The color of the wild birds is black or mottled. The *Mandarin* ducks of China are found both wild and domesticated in Eastern Asia; they have been imported into this country.

The more useful and well known varieties of domestic decks are the *Rouen, Aylesbury* and *Cayuga*, direct from the large wild black ducks that are found around Cayuga Lake, N. Y. They are so completely domesticated that they are justly entitled to be termed a tame variety, highly esteemed, and many think more of them than the famous *Rouen*. They have done better for me.

There are *Crested* ducks of all colors—pure white, black, spotted, gray, &c. The common duck seems to be no breed, as we find them of every and all colors and shades.

Of late I have noticed a new variety of ducks advertised under the name of *Plata*. What they are I am ignorant of; but my curiosity has not been tempted enough to find out or get the ducks, for the inference I draw is, they are similar, or bear some resemblance to the *Brazilian Musk* duck. Plata river is in the same country that the Musk Duck is from, and I received the information that the advertiser imported them from South America, therefore I have reason to believe that they are a Musk duck or closely assimilated.

As the Mallard is the acknowledged origin of the domestic ducks they deserve a prominent and the first notice. Most of your readers are aware of what the Mallard looks like. Hunters call them "greenheads," (the Drakes) to distinguish them from the many wild ducks which frequent our rivers, ponds and marshes.

We have many common ducks almost the exact image of their wild relatives; a description of them would be well to know for those who never saw a wild bird of this variety: Male —head and neck bright grass green, with violet gloss; the top of the head duller; a white ring round the middle of the neck, below which and on the fore part of and sides of the breast the color is dark brownish chesnut. Under parts and sides, with scapulars, pale gray, very finely undulated with dusky; the outer scapulars with a brownish tinge; fore part of back reddish brown; posterior more olivaceous.—Crissum and upper tail coverts, black; the latter with a blue gloss. Tail extremely white; wing coverts brownish gray, the greater wing coverts tipped with white, and then more narrowly with black. Speculum purplish violet, terminated with black; a re-curved tuft of feathers on the rump. Female—wing exactly as on the male; under parts whitish ochrey, each feather obscurely blotched with dusky. Head and neck similar, spotted and streaked with dusky; chin and throat above unspotted. Upper parts dark brown; the feathers broadly edged and banded with reddish brown.

It is impossible to give the date when the Mallard was first domesticated, but it is very certain that it was a very long time ago.

Every boy and girl is acquainted with the domestic representatives of this bird, and as many of the habits of the wild bird very closely resemble those of its beautiful relative, we will forbear, because we are afraid that our readers will not thank us for telling them what they already know.

The Mallard is truly omniverous, its food consisting of anything and everything. It has, as well as our common ducks, a most enormous appetite, will eat things that can give the bird no nutrition whatever, and which we therefore conclude were eaten for the mere pleasure of swallowing them—such substances as strings, feathers, rags, wood, pieces of bone, leather, &c.

The nest of the Mallard is a very simple affair, consisting of weeds and grass arranged very carelessly; they could make it in half an hour; seven to ten eggs is the number laid; they are a pale, dingy green color. They raise only one brood in a season, which follows the parents as soon as hatched. Their flight is rapid, and when on a journey, at the incredible speed of 120 miles an hour!

Several authors disagree on this bird as the parent of our domestic stock, admitting that they will breed together, but so many attempts have been made, and they would always be untamable and fly away—even the crosses—that it seems useless to try to establish them as the ancestry of our common stock; but the majority can come to no other conclusion as to our domestic duck but what they are descended from the Mallard, so long ago and the time so indefinite, that they have from one generation to another lost their wild habits. A large number of the domestic ducks resemble the Mallard too much to arrive at any other conclusion but what they are undoubtedly the parent stock.

CARE OF POULTRY.

When fowls are restless, dissatisfied, and continually scratching, it is often caused by lice; these can be got rid of by supplying their houses or haunts with plenty of ashes, especially wood ashes, in which they may dust themselves, and the bath is rendered more effectual by adding some sulphur to the dust. It must be borne in mind all birds must have the bath; some use water, some dust; but both from the same instinctive knowlegde of its necessity.—Where a shallow stream of water runs across a gravel road, it will be found full of small birds washing; where a bank is dry, and well exposed to the sun, birds of all kinds will be found burying themselves in the dust. Sometimes fowls appear cramped, they have difficulty in standing upright, and rest their knees; in large young birds, especially cocks, this is merely the effect of weakness from fast growth, and the difficulty their long weak legs have in carrying their bodies. But if it lasts after they are getting age, then it must be seen to. If their roosting-place has a wooden, stone, or brick floor, there is the cause; but if this is not the case, stimulating food, such as is used for other diseases must be given.

Fowls, like human beings, are subject to atmospherical influences; and if healthy fowls seem suddenly attacked with illness that cannot be explained, a copious meal of bread steeped in ale will often prove a speedy and effectual remedy. For adults, nothing will restore strength sooner than eggs boiled hard and chopped fine. If these remedies are not successful, then the constitution is at fault, and good healthy cocks must be sought to replace those whose progeny is faulty.

"Prevention is better than cure." The cause of many diseases is to be found in enfeebled and bad constitutions; and these are the consequences of breeding in. Objection is made to the use of the word "cross," and justly so; but the introduction of fresh blood is absolutely necessray every second year, and even every year is better.—*Saunders*.

NEW POULTRY DISEASE.

A correspondent of the Philedelphia *Rural Advertiser* writes of a new disease among fowls—a sort of inflammation of the liver and stomach:

Some time in November, 1864, being on a visit at a relative's, down the Delaware, who kept a good many fine fowls, Bill came in one morning horror-struck, saying:

"It's too bad, Lucy!—There's that splendid Dorking, and eight as pretty pullets as the 'Blue hen's chicken' ever hatched, all as dead as nits."

"Why, Bill! how you talk. What was the matter with them?" Lucy asked.

"Nothing. Not a thing that I can see—all pecked up their supper fast enough last night. I don't understand it."

"Bill," I said, "let's have an overhauling."—So there was an inquest and a *post mortem*. Then I said to Bill: "See here, sir, your fowls have been shut up too close, or too many have been huddled together in roosting, and there has been a lack of free, pure air, and too much corn and buckwheat and hard, dry grain—too little of *potash* in the form that the hen must have it—or an inflammation of the liver, stomach and throat—and there has been a lack of lime and flesh feeding. Now, it is likely that several of the sickest will die, but the slight attacks I think we can cure, and the well ones protect from all future danger."

So we did. There were a dozen more deaths, perhaps. But after that, we got them cleverly in hand, and brought them out safe and sound, on cracked corn scalded, mixing a teaspoonful

of *sulphide* of soda, (don't read it *sulphate*) and a tablespoonful of saleratus with each feeding of two quarts of corn; and feeding scraps and bits of meat and fish, freely ventilating the roost, and keeping the place thoroughly clean underneath.

Since then I have seen three similar instances in two of our near counties, north of Philadelphia; and within these two months two within the city limits. In every instance the disease seems to have resulted from the same cause, and yielded readily to the same simple course of treatment. It is a new disease in poultry, as the diptheria is in humanity—an inflammatory typhoid, growing into a gangrene of the liver and crop—not contagious, but becoming, under certain conditions, fatally epidemic.

ON PRESERVING EGGS.

At a late meeting of the *Farmers' Institute* in New York, a note was received from Mr. W. M. Brown, of Indiana, inquiring whether there is any way to pack eggs so as to keep them good from spring until the winter months? Upon this question the following discussion took place:

"There are various modes of keeping eggs, none of which are quite successful. Sometimes eggs packed in water saturated with lime keep perfectly well, and sometimes they don't. Some persons say they can keep them in water saturated with salt; others keep them packed in fine dry salt; others in charcoal dust. If packed in sand, and kept in a very cool cellar, they will remain through the year. They should always be packed small end up. The best way to keep eggs is to store them in one of Prof. Nyce's Preservatories.

Prof. Smith, Columbia College, said that the common way of preserving eggs in the North of Europe, and which appeared to be more effectual than any other mode he had ever seen was this: The eggs are placed in a barrel, keg, earthen jar, or any other suitable vessel, and then melted tallow, only just warm enough to flow, is poured in, filling the interstices, and hermetically sealing the eggs from the air, which appears to be all that is necessary for their perfect preservation. When wanted for use, they are readily obtained by warming the open end of the vessel to soften the tallow.

Solon Robinson.—I think lard or oil would answer the purpose; it would be more convenient. I have heard molasses recommended, and do not see why it would not answer perfectly.

Mr. Carpenter said he had found no difficulty in preserving eggs in fine dry salt. He packs them endwise, and about once a month reverses the ends of the casks, or rather box, with straight sides, so that a board and cloth or paper fits down and holds the contents in place when reversed.

Prof. Tillman gave it as his opinion that anything which would exclude air would preserve eggs. Recent experiments in France have developed the fact, that varnishing the shell destroys the value of the egg for incubation.

Mr. E. Williams said he had seen eggs perfectly preserved by packing in meal."

A certain knowledge as to how to keep eggs in perfection for several months in succession, would be of very great importance to the West. Wherever wheat is largely grown, eggs may be produced almost without limit, and at a trifling cost. But a large portion of them must be kept until they accumulate in considerable quantities, and then be transported long distances before they reach a market. The amount brought down the Mississippi River to New Orleans is immense. They are generally packed in oats, in boxes made for the purpose, and in many instances exchanged, box for box, for oranges, and as many of them probably prove addled, as there are of the oranges rotten.

The sitting hen and goose know how to prevent their eggs from spoiling. Let us take a lesson from them.

Every person who has broken an egg must have discovered that, directly under the shell, there is a strong, compact film; it is thin, but close, tough and leathery. This is supposed to be impervious to air, while the shell is not, but is porous. If therefore the egg remains still for many days in succession, the film becomes attached to the shell where it bears upon it and the action of the air passing through the shell induces decay, so that the film becomes ruptured. The air is then admitted to the pulp of the egg, and it is soon ruined. In order to prevent this the sitting hen turns her eggs once in three or four days or a week, and the sitting goose nearly every day! Wonderful instinct! Some of our best lessons come from the humblest members, both of animal and vegetable life.

Packing eggs, therefore, in oats, meal, bran,

or any substance that admits a circulation of air, will not preserve them if they are allowed to remain in the same position. But if turned upside down once in seven days, they will be quite likely to remain perfectly sweet and good for several months. If packed in lard, or tallow, so as to exclude the air, perhaps the same result might be gained without reversing their position. But this mode would be expensive and inconvenient, and leave the eggs in an unpleasant condition when wanted for use. Follow the example given by the hen, and we shall be safe. Pack them in sawdust, bran, meal, straw or hay, on the side, or on either end, and reverse the box or cask once a week, and the eggs will remain good for months.

For family use, however, where eggs are daily taken from the box, the packing is disturbed, and it would not be safe to turn them over. A better way is to bore holes an inch and a quarter in diameter, in a board, and hang the board to the flooring timbers of the cellar, at a height which will be convenient to stand by and reverse the eggs once a week. The trouble will be found very slight. A board five feet long and one foot wide will hold fifteen dozen and two eggs, and leave sufficient room between them for the fingers while changing their position. In this way a supply of eggs for the winter may be purchased when they are cheap, and kept sweet and sound for several months. At the end of a year, a friend of ours found six, put away as above, to test the plan, just as perfect as those laid the day before.—*New England Farmer.*

For the Ohio Farmer and Cultivator.

SWELLED UDDER IN COWS.—Who will inform me of the cause of a swelling in the udder of a cow—sometimes in one teat and sometimes in another? They swell from one milking to the next, and by the next milking the swelling is gone and the milk curdled. Any one who can give a remedy will confer a favor on your correspondent. THOS. SMILEY.

Carrol Co., Ohio.

REMARK.—Without a better description of this trouble, we should say it is what is called the garget, and can be cured by the usual remedies for that complaint, one of the best of which is to cut a slip of poke root two or three inches long and the size to enter the calibre of the teat, insert it within the teat and secure it by a sticking plaster over the end for twelve or twenty four hours.

Miscellaneous Articles.

JEWISH SYNAGOGUE AT BERLIN

The Jewish synagogue just completed at Berlin, but not yet consecrated, is one of the most gorgeous buildings in Europe. The entire cost of the structure is estimated at a million of thalers, $750,000 in gold. To give a description of the building is utterly beyond my power. It is surmounted by a huge dome of the Oriental type, which can be seen from every housetop in Berlin. It is not less conspicuous for its Eastern form than for the heavy gilding which covers it in every part. Besides, there is also a minor dome, also richly gilded. The interior is broken up into the great central hall of worship, not far from a hundred feet in length, and provided with three thousand chairs for the worshipers. These are of oak and richly carved. The number of seats on the ground floor, and devoted to the men, is precisely equal to the numbers in the two galleries devoted exclusively to the use of the women. The finish of the interior is of the most elaborate kind, and yet there is not a word or symbol in the building except the imitation of the Commandments behind the pulpit.

The ground color of the wall is brown, but it is so profusely studded with stars, and very delicate tracery, done in gold, that the eye is dazzled with the splendor. The whole is lighted with two thousand burners, and the cost of the gas burned each hour is fifty dollars. The rooms for committees, and for small meetings, are as splendid in their way as the main hall. The general arrangement of pulpit, reading-desks, pews and galleries is not unlike that of a Christian church, and yet there is a certain indefinable something which seems different. All was more or less Oriental in its general effect. The organ is in the lower gallery, not opposite the pulpit, but is at the same end with it: it is a first-class instrument, but it is entirely concealed from view by a screen. The price of a single sitting in the church is five hundred dollars at the present rate of American paper. It would require a not inconsiderable fortune to buy a pew for an American family.

In size and splendor, this new Jewish synagogue unquestionably eclipses the Temple of Solomon. In its erection the best of materials have been used, and the highest skill employed

in every department. The mere experimental preliminary attempts in painting the interior cost more than $10,000. The Jews of Berlin are proud of it, of course, for there is no place of worship in the Prussian capital which can compare with it. The cathedral connected with the national church of the land is insignificant compared with this new Jewish temple. It is in the display of wealth involved in this building structure that the Jews can show what power they possess, and the pride of which it is the expression, is even stronger than the internal hatred of the two sects of Jews whose united money built it.

Ice as a Medicine.—Marvelous results have lately been noted from the use of ice applied to the spinal nerves. Its frequent application in some severe cases of apoplexy has relieved the patient. It is applied to the lumbar plexus of the nerves over the spine, alternated with hot water to the feet. A case of undoubted hydrophobia has been cured by following that treatment. The patient was bound to the bed, and a thorough wet cupping from the head down the whole length of the spine, followed with ice applications for two or three days uninterruptedly. Pulse and breathing became quiet, pain gradually left him, and complete recovery was the result. In the French hospitals, the ice treatment in cases of nervous debility, paralysis of the motor nerves, prolapsus uteri, convulsions from teething, and puerperal convulsions, has been successful without a drop of medicine. The great secret of the mode of treatment consists in using the ice long enough to get its tonic effect only, which is a nice point, and requires great care from the medical attendant, as short applications of ice are powerfully neur tonic, while its too lengthy application debilitates the patient.

New Siberia and the Isle of Lakon are, for the most part, only an agglomeration of sand, ice, and elephant's teeth. At every tempest the sea casts ashore fresh heaps of mammoths' tusks, and the inhabitants are able to drive a profitable trade in the fossil ivory thrown up by the waves. During summer, innumerable fishermen's barques direct their course to this isle of bones; and in winter immense caravans take the same route, all the convoys drawn by dogs, returning charged with the tusks of the mammoth, weighing each from 150 to 200 pounds. The fossil ivory thus obtained from the frozen north is imported into China and Europe, where it is employed for the same purposes as ordinary ivory, which is furnished, as we know, by the elephant and hippopotamus of Africa and Asia.

Little and Big Sermons.—The writer of this once heard a lay brother make the following remark of his minister, whose pulpit talents were quite ordinary: "Our pastor comes to the pulpit on Sunday morning and preaches a little sermon; and in the afternoon he comes again and preaches another little sermon. In the evening he comes into the prayer meeting, full of love, and we all have a good time, praying, singing and exhorting. Then on Monday, after spending the forenoon in his study, he goes out and sees a family of his congregation, and talks to them about Jesus; and does the same on Tuesday, and each day of the week, and by Saturday night the little sermons on Sunday have grown into big ones." One can easily conceive how a people would be satisfied with such preaching. Reverse the matter. If great sermons on the Sabbath become little ones during the week by manifest inconsistencies, would it not destroy all pulpit efficiency?

Poetry of Nature.—Bend thy blue course, oh stream, round the narrow plain of Lutha. Let the green woods hang over from their hills, the sun look on it at noon. The thistle is there on its rock, and shakes its beard to the wind The flower hangs its heavy head, waving, at times, to the gale. "Why dost thou wake me, oh gale?" it seems to say: "I am covered with the drops of heaven. The time of my fading is near—the blast that shall scatter my leaves. To-morrow shall the traveler come; he that saw me in my beauty shall come. His eyes will search the field, but they will not find me.' So shall they search in vain for the voice of Cona, after it has failed in the field. The hunter shall come forth in the morning, and the voice of my harp shall not be heard.—*Ossian.*

Cement for Broken Crockery.—Crockery ware will get broken by accident or careless handling, and often in such a way that it may mended to be nearly as good as new. Ground white lead paint in oil, with a little drying varnish or laquer, makes a good cement for broken crockery ware. The white of egg mixed with fine flour of fresh air slaked lime makes a first rate cement and one that can readily be had by any housekeeper.

Editor's Table.

The Hay Crop in Northern Ohio, though of very good quality and fair in quantity, will not be what was expected for such a wet season. The winter was hard upon the grass roots.

The First Ripe Peaches we have seen this season arrived by express from Cincinnati, on Monday of this week. We did not learn where they were grown, but they looked as if they had come a long way and were a good deal discouraged.

Lawton Blackberries.—Our first picking of Lawton Blackberries this season came to the table on the 22d of July—Sunday of this week. The berries are extra large, well ripened and the whole crop will be fair. On our deep sand the Lawtons flourish best in a wet season with a few fair days occasionally, to ripen off the fruit.

Harper for August.—The illustrated articles in this number are—"More Curious Homes," "Three Months with Italian Brigands," "Heroic Deeds of Heroic Men—Opening the Mississippi," and "National Cemeteries." The remaining articles are such as will interest the most listless reader. Call on Messrs. Cobb, Andrews & Co. for a copy.

Orwell District Society.—The officers of the Orwell (Ashtabula Co.) District Agricultural Society for the current year are:—J. J. Dodge, President; Thomas Day, Vice President; C. A. B. Pratt, Secretary and Treasurer; H. S. Baker, I. Clapp, D. Northway, A. E. Peck, L. Leonard, H. J. Stone, L. Waters and F. Harrington, Directors. The Secretary says they expect the largest Fair this fall they have ever had.

The Hessian Fly.—Wheat growers suffer greatly by the ravages of this insect. It can be easily destroyed in the following manner:—About the middle of August sow a strip of wheat adjoining where you intend to put your crop—say one or two acres. About the middle of September sow your field. When that has come up and shows cleverly, plow under deeply the first sown. The fly is headed, and your crop is safe.—*Rural World.*

Topping Hay Stacks.—A correspondent describes a method of fastening the cap of a hay stack which he thinks preferable to the usual way of fastening by a rider of two sticks of wood held in place by a hay rope at the peak of the stack. The method proposed is to take a stake five or six feet in length sharpened to a point at one end and driven perpendicularly into the centre of the top of the stack. Whether this plan would be better than the use of the saddle riders could be easily tested, but it seems to us the riders will better keep the wind from turning up ruffles around the top of the stack.

For the Ohio Farmer and Cultivator.

GRAPES IN CINCINNATI.

I am pretty busy to-day, and it is too hot to write even upon pleasant topics, but I must take time to say that those of us who did not take brother Yeatman's advice "to dig up our vineyards and plant locusts," are making a good thing of it. The beautiful Ohio is still to be the Rhine of America. Our Catawba vineyards are all full, and no sign of rot or mildew. In a word, the whole Ohio grape region, as it was known before you Northmen commenced raising sour grapes, is groaning under its heavy load. This is to be a grape year in Southern Ohio. At the meeting of our Horticultural Society to-day there was a general comparing of notes, and no vineyard was known to be affected with any disease. Jack Mottier's vineyards are producing finely, and he will yet be back with us. Yours fraternally,

E. A. Thompson.

Cincinnati, July 21, 1866.

For the Ohio Farmer and Cultivator.

Knox County.—We have had a fine growing season since the first of June; corn looks unusually well, a large breadth in; potatoes the same; oats are about ripe, and are very fine, and a great breadth in; barley good; flax not much in, but good; grass moderate in quantity but quality good. The past week has been quite favorable for hay-making, but the last two days has been quite wet. Winter wheat is almost a failure, but those who had the gumption to sow spring wheat are just "in town." Spring wheat is excellent. Where spring wheat was drilled in on fields in good condition, where winter wheat was killed, it looks finely and is now about ready to harvest. W. B.

Mt. Vernon, July 20, 1866.